

3.2.1 Innovation Ecosystem Proofs

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SOCIETY OF ST. FRANCIS XAVIER, PILAR'S
FR. CONCEICAO RODRIGUES COLLEGE OF ENGINEERING

(Approved by AICTE & Affiliated to University of Mumbai)

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Website : www.frcrce.ac.in • Email : crce@fragnel.edu.in



RESEARCH PROMOTION POLICY

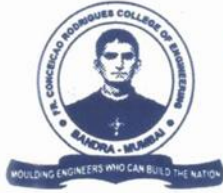
Effective from 17th Oct 2022



DR. KETKI JOSHI
In-charge Research and Development

DR. SURENDRA RATHOD
Principal

Moulding Engineers Who Can Build the Nation



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Preamble:

Fr. Conceicao Rodrigues College of Engineering encourages multidisciplinary quality research related to science, engineering and technology in the domain of Computer Engineering, AI and Data Science, Electronics engineering, Mechanical engineering, Sciences and Humanity. Academic research, funded research projects, and the creation of intellectual property in the engineering and technology domains are all part of the research activities. The institute strives to create a vibrant research environment for faculty and students engaged in emerging areas. A research and development committee is formed to support the research ecosystem and channel the related activities.

Vision:

To foster an environment conducive to multi-disciplinary research in engineering and technology.

Mission:

1. To promote inventiveness and moral research among faculty, students, and alumni.
2. To encourage interdisciplinary and collaborative research that benefits various facets of society and industry.

Objectives:

- To inspire faculty and students to realize their research potential and improve their involvement in research and development activities.
- To support collaboration and interdisciplinary research projects.
- To support the students and faculty in their efforts to create, protect, and leverage Intellectual Property Rights.

In light of these goals, a research and development committee has been formed at Fr. CRCE to strengthen the institute's presence in the field of research by actively promoting research culture and facilitating research activities.

Short-Term Objectives:

- Conducting faculty and student development programmes to improve understanding of research and IPR.
- Creating awareness and encouraging quality research publications in standard journals.
- Creating awareness and encouraging students and faculty to apply and publish patents and IPR.
- Facilitating applications for research grants to various funding agencies



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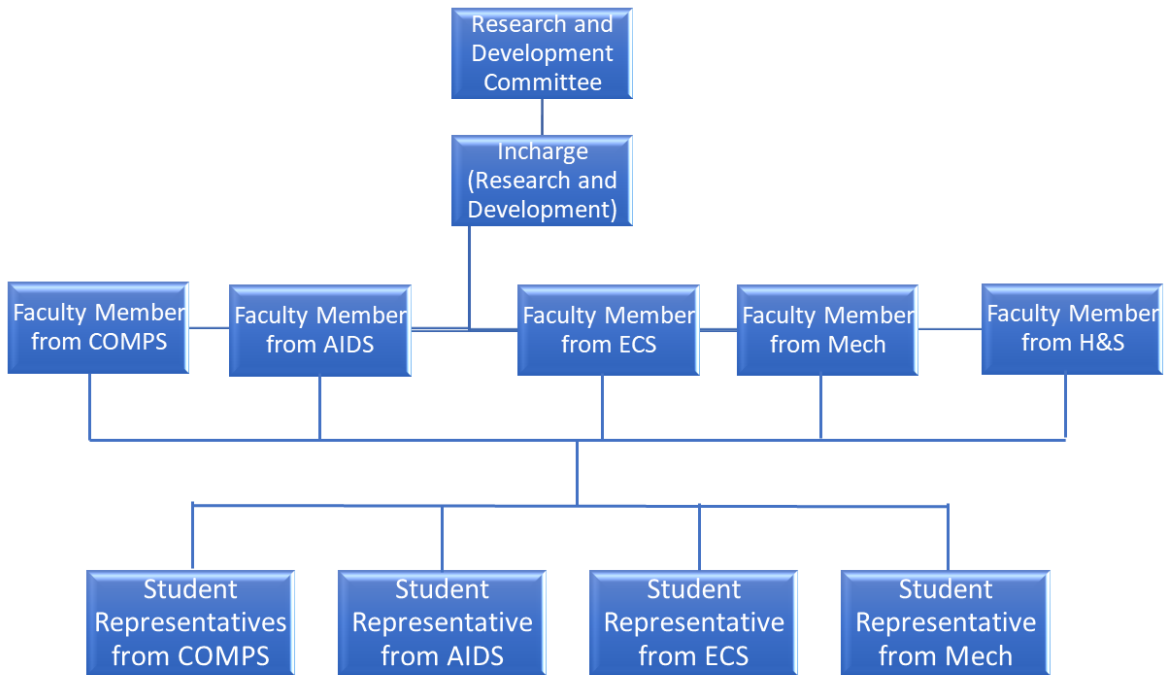
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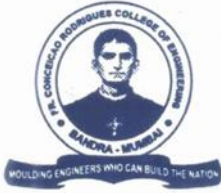
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Long-Term Objectives:

- Collaborating with national/international agencies on research projects and IPRs.
- Enhancing research contribution by the students and faculty in the institute and improve its research ranking.
- Channelizing efforts by researchers to receive grants, commercialization of Patents and IPRs and the technology transfer.
- Engaging the researchers in providing technology solutions to practical problems implementable in the industry and society.

Structure of Research and Development Committee





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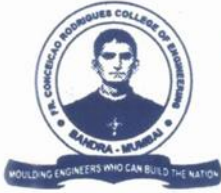
Roles and Responsibilities of the Committee:

Faculty Members in the Research Committee:

1. To work toward motivating Institute faculty and students to achieve R&D objectives, short-term and long-term research and development goals.
2. Encourage faculty to write effective research proposals and to provide the necessary assistance when applying to various funding agencies.
3. Encourage faculty and students to organise and attend conferences/STTP/workshops/Seminars/Training/FDP/SDP related to cutting-edge technology, research, and intellectual property.
4. Raise awareness of, and encourage, quality publications, research contributions, and IP generation among faculty and students.
5. To familiarise students with new technological innovations and research prospects.

Student Representatives in the Research Committee:

1. Assist faculty members in organising various events such as workshops, seminars, trainings, and certification courses to promote research and intellectual property rights.
2. Informing students about various R&D initiatives and research project opportunities, and encouraging them to participate in related activities.
3. Encouraging students to publish research papers or apply for patents related to minor or major projects completed during the academic course.



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Department of Electronics and Computer Science

Major Thrust Areas and Research Facilities

Abstract:

The department was established in 1987 with B.E. in Electronics Engineering. From the academic year 2019-20, the course is renamed to Electronics and Computer Science to cope up with the 4th Industrial revolution. The perfect blend of knowledge of computer technologies with electronics provides the path to the new edge computing. In line with one of the missions of the department “To cultivate an ambience to encourage innovation, research and entrepreneurship skills”, the R & D cell promotes research culture and research projects in the department by providing computing as well as hardware facilities. The main focus is to develop multi-disciplinary projects that address the societal problems in real-life. One of the possibilities could be by integrating AI/ML solutions in Internet of Things (IoT) in areas like Smart farming, Healthcare, Smart Cities, etc. Novel research in solving security issues in IoT is also a desired outcome. The department also aims to produce quality research publications and competent multi-disciplinary projects by students and faculties. The department/institute also offers honours/minor Degree programs in Artificial Intelligence and machine learning, cyber security and, Block chain.

Objectives:

1. To investigate and analyse the issues related to power consumption, security, data privacy and data linking in real-world and provide solution using IoT and related technologies.
2. To design, analyse and develop automated system with appropriate consideration for public health and safety, and the cultural, societal, and environmental considerations.
3. To develop system and applications programs by optimizing, analysing and investigating the theoretical analysis of the algorithms.

Research Domains:

The department has following research domains mainly.

1. Internet of Things
2. Automation
3. Computation and Algorithms
4. VLSI Design



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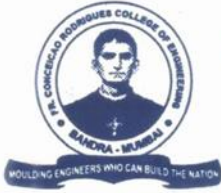
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Research Facilities:

The facilities available with departments/Institute are as follows:

Thrust Areas	Description	Facilities/ resources
Internet of Things	Issues related to Power consumption, Security, Data privacy, Complexity of Data, Issues related to data linking and processing	Raspberry Pi4 Model B (4GB) Kit with Sensors, Node MCU ESP8266 Board, IOT based digital electronics workbench, IOT Sensor Interface, ESA 51 E, PIC 18Fxx Board with LED USB Interface
Automation	Nonlinear Systems, Multi-agent systems and their coordinated control, Intelligent Data Mining Algorithms and Applications, Health Monitoring and Intelligent Fault Diagnosis Systems, Soft-Computing in Modelling and Control, Brain Computer Machine Learning, Unmanned Aerial Vehicles	Instrumentation and Transducer trainer with on board Sensor and Actuators, 6 Axis Robotic, Arm with 250gm Payload Capacity, Industrial 4 port I/O link IFM Germany make with Temperature and speed I/O Sensors, PLC TRAINER-10 with Allen Bradly micrologix 1400(with software license), HUMAN MACHINE INTERFACE (HMI), WINLOG PRO,32TAG WEB ENABLED SCADA SOFTWARE
Computation & Algorithms	Data structures, Algorithms, Computer organization and architecture, Operating system, Object oriented programming, Image processing, Machine Learning, Deep Learning, Artificial Intelligence	Department has three computing laboratory with state-of-the-art software/tools like Jupyter, Tensorflow, JDK, PGAdmin, Hadoop. Specialized high end Machine learning server with 32GB GPU to cater to ML projects.
VLSI Design	Analog CMOS VLSI Design, Mixed Signal Design, FPGA based System Design	FPGA prototype boards, Simulation tools



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Department of Mechanical Engineering

Major Thrust Areas and Research Facilities

The department presently offers B.E. (Mechanical Engineering), M.E. (Mechanical Engineering) with specialization in CAD/CAM and Robotics and Doctoral Program in Mechanical Engineering. The department also offers honours programs in Robotics, 3D Printing, Data Science and IOT.

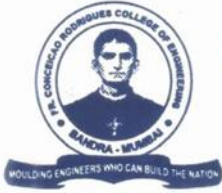
Having a legacy in production engineering since its establishment in 1984 and experience in offering Mechanical Engineering program at PG and PhD level, the department converted UG program in production engineering into mechanical engineering in 2019-20, in response to the changing industry requirements. With an experienced and qualified pool of faculty and state-of-art laboratories, the department has the following research domains and departmental/institute level facilities.

Research Domains:

The department has three research domains.

1. Manufacturing
2. Design
3. Automation

Research Domains	Thrust Areas	Research Facilities
Manufacturing	Design of CNC Systems Smart materials Nano materials Composite materials Material characterization Microstructure analysis Minimum quantity lubrication machining MQL Machining with nano-fluids Sheet metal forming Plastic injection moulding Additive manufacturing Computer Aided Manufacturing Manufacturing System Simulations Discrete Event Simulation Manufacturing Process Simulations Machine vision and applications	Production Grade CNC Machines MQL unit High resolution inverted microscope with material analysis software Digital UTM Fatigue Tester Metallurgical Furnace 3D Printer Arena Manufacturing System Simulation software



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Design	Computer Aided Design Computer Aided Engineering Simulation based Design and Optimization using Finite Element Analysis (FEA) Simulation based Design and Optimization using Computational Fluid Dynamics (CFD)	Modelling and Analysis softwares: Autocad, Solidworks, Ansys, NX11 Machine Learning and data analytics softwares
Automation	Mechatronics and IOT Industrial Robotics Vision Systems	Automation Softwares: Fluidsim for Pneumatics and Hydraulics PLC Systems Robotic Arm



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Department of Computer Engineering

Major Thrust Areas and Research Facilities

The Department of Computer Engineering was established in 1991. The department offers B.E. in Computer Engineering, a four-year degree program with an intake of 120 students. It has excellent infrastructure and highly qualified and professionally skilled faculty. The department conducts various training programs to help faculty and students to improve their technical knowledge. The Department has received a Research Grant from the Department of Science and Technology (DST), and Mumbai University for Innovative Projects and Minor Research Grant. It has signed MoU with several companies like Tata Consultancy Services, IBM and D-Link. Graduates of our department have been recruited by major IT companies such as TCS, Accenture, Morgan Stanley, JP Morgan Chase, ZS, Seclure, SAP, Amdocs to name a few.

Abstract:

The Department of Computer Engineering has a goal to increase the number of innovative and mostly multi-disciplinary research projects through the efforts of faculty members and students. This results in the nurturing of research activities, the procurement of equipment and the development of state-of-the-art research facilities. These projects address the requirements of real-life problems. More importantly, one of the major mandates of the Department of Computer Engineering is to participate in international conferences and reputed journals. The issue of concern to society is also addressed by the faculty members and students through sponsored projects. The deliverables of the R&D endeavour are innovative and affordable technology and products.

Thrust Areas and Subareas of Computer Engineering Department:

Big Data, IoT, AI, and automation are the key components of Industry 5.0 in every industry. Therefore, it is crucial to investigate interdisciplinary fields for computer science and engineering applications. Cyber Physical Systems is one of these areas, where joint research projects are carried out with other departments.

Research domain	Description	Facility
Data Science, Artificial Intelligence and Computing	Machine Learning, Deep Learning, Natural Language Processing, Big Data Analytics, Data and Web Mining, Machine Vision, Cloud Computing	Advance Computing Lab supported with Deep Learning and Cloud server.



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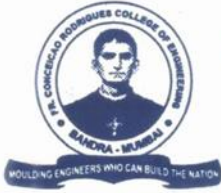
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Cyber Physical Systems	Blockchain Technology, Cryptography and Network Security, Cybernetics, Human- Computer Interaction, Robotics, Quantum Computing, Internet of Things	Network and Security Lab supported with D Link DCS wireless kit and switches.
Software and System Engineering	Algorithms, Computer Architecture, Operating system, Database Systems Software Engineering	Programming and Database Lab



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Department of Artificial Intelligence and Data Science Engineering

Major Thrust Areas and Research Facilities

Globalization, fast-paced growth of data and technological advancement has created a lot of exciting career opportunities. Data Science and Artificial Intelligence are the two most important technologies in the world today. While Data Science makes use of Artificial Intelligence in its operations, modelled after the natural intelligence possessed by humans, Artificial Intelligence is the algorithmic intelligence that is possessed by the machines to perform various autonomous actions. Data Science is a multi-disciplinary field that has conquered industries around the world. It has brought about a fourth industrial revolution in the world today. This is a result of the contribution by the massive explosion in data and the growing need of the industries to rely on data to create better products. We have become a part of a data-driven society. Data has become a dire need for industries that need data to make informed decisions. Fr. CRCE offers a new-age BE program in Artificial Intelligence and Data Science with the main objective of setting up students' careers in the most high-demand industry of the twenty-first century. Department has an experienced pool of faculty and UpToDate computing lab facilities to excel in this domain. Yet, our relatively small size makes for a collaborative and cooperative environment within which a broad set of research groups flourish.

Thrust Areas and Subareas of AI&DS Department:

Research domain	Description	Facility
Data Science, Artificial Intelligence and Computing	Machine Learning, Neural networks and Deep Learning Data Mining Natural Language Processing, Big Data Analytics, Data and Web Mining, Machine Vision, Cloud Computing Pattern Recognition Data warehousing	Advance Computing Lab supported with Deep Learning and Cloud server and Workstations with configuration such as Intel core i7-11700, 16Mb cache, 8 core, 16GB, DDR4, 1TB HDD, Nvidia T1000



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Department of Humanities and Science

Major Thrust Areas and Research Facilities

Humanities and Science department established in 1984. With an experienced and qualified pool of faculty and state-of-art laboratories, the department has the following research domains and departmental/institute level facilities.

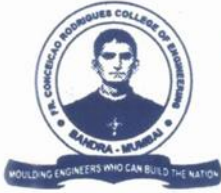
The department has four research domains-

1. Physics
2. Chemistry
3. Mathematics
4. Communication Skills

Research Domains	Thrust Areas
Physics	Material Science Conducting Polymer and their Nanocomposites Material characterization
Chemistry	Plant Extraction Medicinal Chemistry Material Chemistry Nanotechnology Environmental Chemistry
Mathematics	Mathematical Finance Game Theory Environmental Science
Communication Skills	English Literature Communication Skills

Research Facilities:

Department has sufficient facilities to conduct experimental as well as theoretical research in mathematics, sciences and humanities. Various test and measuring instruments are available in the department.



Institute Initiatives to Promote Research and Development

International Conference on Advances in Computing, Communication and Control

A biennial multidisciplinary International Conference on Advances in Computing, Communication and Control (ICAC3) is organised by Fr. Conceicao Rodrigues College of Engineering. The primary goal of this conference is to promote research and development activities in Computing, Communication and Control in India and the rest of the world. The Conference also aims to offer a collaborative platform for the people in Academics, Research and Industry to address emerging issues and solutions in the above-mentioned areas. The previous seven editions of the Conference were organized in January 2009 (In cooperation with ACM), January 2011 (Springer), January 2013 (Springer), April 2015 (Procedia Computer Science), December 2017 (IEEE), December 2019 (IEEE) and December 2021 (IEEE Xplore) respectively. The best paper award is also given to the authors whose work represents breakthrough research in the respective field.

Anti-plagiarism software

Turnitin Anti-plagiarism software is purchased by the institute to facilitate the submission of quality research papers. It is essential that the software is extensively used by the faculty to check originality of Research Papers, Doctoral Thesis, PG and UG reports by the students.

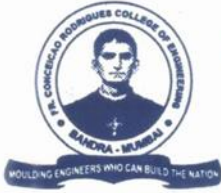
Sponsored Research Projects:

Fr. CRCE encourages faculty to submit a research project for extramural funding to various institutions such as the All India Council for Technical Education (AICTE), Department of Science and Technology (DST), University Grant Commission (UGC), University of Mumbai etc. The Research and Development Committee will provide assistance and support in the submission of sponsored research projects to various funding agencies. The committee will facilitate proposal review by involving senior researchers from the institute related to the respective domain to evaluate and comment on necessary improvements related to the idea, methodology, feasibility, novelty, and contribution.

Even though all teachers are encouraged to apply for various research grants, it is mandatory for Professors and Associate Professors to apply for Major Research Grants in every academic year. Annual performance of Professors and Associate Professors will be judged based on the research grants applied and amount of research grant fetched.

Workshops/Seminars/FDPs/STTPs/SDPs:

Fr. CRCE has organised and shall continue to organise a variety of workshops, seminars, FDPs, STTPs, SDPs, and trainings on cutting-edge technologies, research, and intellectual property. The committee on research and development will encourage faculty and students to organise and participate in such activities. The committee will plan and carry out various Research and IPR-related activities to facilitate idea exchange and promote research culture, with the goal of improving individuals' and the institute's research profile.



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Research Collaboration and Memorandum of Understanding (MoU):

The Research and Development Committee, in collaboration with the research guides of the research centre and experienced faculty members from various domains, will facilitate the signing of Memorandums of Understanding (MOU) related to research activities with various organisations. Annual performance of faculty shall be judged on successful research collaboration with industries and research

The institute has MoUs with various organizations/universities/institutes Tata Consultancy Services, IBM, D-Link, University of Texas at EL Paso. Synergy Consultancy, Christiani Sharpline to name a few.

Research Scholars Colloquium:

Research colloquium is the proposed activity which can be conducted during the international conference ICAC3 being organised by the institute biennially. The research scholars and faculty working on sponsored project will be presenting their ongoing research project or sponsored project. The activity will be open to all the faculty, students and research scholars with the objective of facilitating interaction and sharing the latest results and findings with the faculty and students interested in the related field. The award may be given to the best presentation to encourage quality research and development.

Paper publications / Patent Applications related to B.E./M.E./PhD Project Work

B.E./M.E. students are required to publish a paper or apply for patent / copyright based on the outcomes of the major project. It is essential that the students follow industry standards specific to their domain and use open-source software Latex while writing project reports. For PhD all the norms related to publications given by University of Mumbai should be followed.

Paper publications / Patent Publications by Faculty

1. Faculty publications and patents are integral part of ranking and accreditation of programs and institutes. Good quality publications indicate research culture of the institution and can bring laurels to the institute and faculty involved. Hence faculty are required to publish paper or file a patent every year. It is mandatory for every faculty to publish at least one journal paper in an academic year.
2. Quality of publication has always been a matter of concern and hence it is necessary to set minimum acceptable standards. At Fr. CRCE, publication by faculty would be claimed if it is published in **SCI, Scopus or Web of Science index journal**.
3. It is mandatory for everyone to write '**Fr. Conceicao Rodrigues College of Engineering**' as an affiliation in the papers. Affiliation should be mentioned in full and not the acronyms like CRCE.
4. All faculty members should create and use **ORCHID ID** and should be linked to the Scopus.



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Incentives / awards for research achievements:

Financial support to Undergraduate students for paper presentation at national / international conference: Undergraduate students are eligible to get financial assistance in the form of partial reimbursement of the conference registration fee on successful presentation of the paper at national / international conference with necessary prior approvals. Research and Development committee can scrutinise the applications and institute financial supports will be based on quality of paper, quality of journal/conference and impact of research.

Best Ph.D. Thesis: Ph.D. thesis of all the research scholars completing Ph.D. from the college research centre during the academic year will be evaluated by an expert panel. Best Ph.D. Thesis will be awarded to the researcher having most significant research contribution among the candidates. The evaluation will be based on the criteria related to publications in national and international journals, conferences and transactions, book chapters, awards and recognitions, collaborative research, funding and IPRs. Rubrics for evaluation of best thesis shall be developed.

Research Grant: A faculty member working on a research project funded by external agency will be provided necessary support from the institute for its completion and will be permitted to use the infrastructure and research equipment available in the institute, with prior approval through proper channel. Institute may issue 'Letter of Appreciation' to a faculty member who successfully complete the funded research project.

Annual Reports:

The research and development committee will prepare the following annual reports at the end of academic year:

- R&D activities conducted during the year
- Faculty and student contribution to research
- List of publications by faculty and students



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RESEARCH ETHICS POLICY

Effective from 17th Oct 2022



DR. B. S. DAGA
Member Secretary (Institutional Ethics Committee)

DR. SURENDRA RATHOD
Principal

Moulding Engineers Who Can Build the Nation



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Section 1: Objective

FR. CONCEICAO RODRIGUES COLLEGE OF ENGINEERING, a premier Engineering College, is committed to develop best quality technical personnel with sound knowledge in basic engineering principles, technical skills, innovative research capabilities and exemplary professional conduct to use technology for the benefit of society with the highest ethical values. The college is established to impart uninterrupted dissemination of knowledge to top ranking students from all sections of the society. The college is responsible to cultivate higher values of honesty, integrity, responsibility, mutual respect for persons and property and respect for human rights.

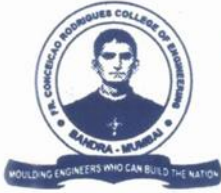
In order to achieve this, appropriate guidelines are framed to enforce professional ethics in the personal conduct which will be binding on all the students and staff in the college. Institutional Ethics Committee is constituted to formulate Research Ethics Policy for FR. CONCEICAO RODRIGUES COLLEGE OF ENGINEERING.

Section 2: Institutional Ethics Committee (IEC)

The Institutional Ethics Committee shall be comprised of senior faculty members with Principal as the Chairman of the committee. An IEC is established to formalize institutions commitment to the promotion of high scientific and ethical standards in the interest of communities and researchers. All research involving human subjects or data related to human subject as a patient should be conducted in accordance with the three basic principles, namely Beneficence, Respect for Persons and Justice.

Section 3: Responsibilities of Institutional Ethics Committee

- Formulate the Research Ethics Policy for Fr CRCE
- Provide independent and competent review of all ethical aspects of research proposals
- Review research proposals submitted to it within a reasonable time and document its views in writing to the applicant's
- Safeguard the dignity, rights, safety, and well-being of all study participants and communities paying special attention to investigations that may involve vulnerable participants
- Consider the suitability of Investigator(s) for the proposed study with respect to relevant qualification, training and experience.
- Report breaches of Research Ethics Policy or non-compliance of ethical practices among students, faculty and staff to the Principal for taking necessary actions.
- Recommend actions on non-compliance of ethical practices among students, faculty and staff
- Propose corrective actions on report of non-adherence to the Policy.
- Remain trained and up to date on the regulatory requirements

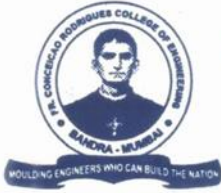


- Make amendments and clarity to the Policy as and when required.
- If required then review following documents to arrive at the conclusion:
 - (i) Experimental Methodology
 - (ii) Protocols followed during experimentation
 - (iii) Investigators profile
 - (iv) Investigators agreement with sponsor
 - (v) Investigators undertaking

Section 4: Responsibilities of the Students/Scholars

It shall be the responsibility of the students and scholars to:

- (i) Read, understand and be aware of this Research Ethics Policy and subsequent amendments brought to it.
- (ii) Respect the laws of the country, rights of individuals and to conduct in a responsible and dignified manner at all times. One must show due respect to people while interacting for academic purposes by way of data collection, and surveys for student projects.
- (iii) Obtain written consent from human subjects/participants and prior approval of Research Ethics Committee in projects involving any kind of direct measurement of human physiological parameters such as ECG/EMG etc.
- (iv) Ensure that, the rights of an individual will be respected and their property and life will not be put under threat at any circumstances. Academic work must not pose a risk or danger to people or the environment. Necessary clearances and permits/licenses must be obtained while handling, storing and disposing of radioactive, toxic or harmful materials.
- (v) Follow ethical practices in publications/thesis/project reports etc. by checking plagiarism and by avoiding self-plagiarism. Be cautious to avoid so-called "predatory journals" which publish papers with minimal or no review. It is unethical to publish in such journals of this nature.
- (vi) Carefully avoid data fraud and all unacceptable forms of data manipulation, such as or subtracting data points at will, editing images to produce a false result, creating images artificially and presenting them as data or using the same figure or table to describe different experiments. The conclusions claimed in a research paper must be genuine.
- (vii) Honestly claim authorship of documents. The list of authors in research papers, reviews, books, monographs or policy documents should not be manipulated to give undue credit to those who have not contributed ("honorary authorship") or deny credit to those who have contributed sufficiently.



SOCIETY OF ST. FRANCIS XAVIER, PILAR'S
FR. CONCEICAO RODRIGUES COLLEGE OF ENGINEERING

(Approved by AICTE & Affiliated to University of Mumbai)

Fr. Agnel Ashram, Bandstand, Bandra (W), Mumbai - 400 050.

Phone : (022) 6711 4000, 6711 4101, 6711 4104

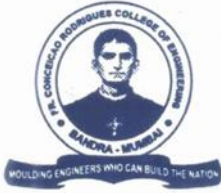
Website : www.frce.ac.in • Email : crce@fragnel.edu.in

(viii) Improve the balance of under-represented sections and provide supportive environment by avoiding bias, favouritisms and discrimination of any kind. Academic communities are enriched by the presence of people of different ethnicities, genders, religions, castes, tribes, socio- economic strata, affiliations, backgrounds and sexual orientations. There must not be direct or indirect bias or discrimination against any individual based on the above categories.

Section 5: Responsibilities of Staff

It shall be the responsibility of the members of staff to:

- (i) Read, understand and be aware of this Ethics Policy and subsequent amendments brought to this Research Ethics Policy.
- (ii) Respect the rights of individuals and to conduct in a responsible, unbiased and dignified manner at all times. One must show due respect to people while interacting for academic purposes by way of data collection, and surveys for student projects.
- (iii) Obtain written consent from human subjects/research participants and prior approval of Ethics Committee in projects involving direct measurement of human physiological parameters such as ECG/EMG etc.
- (iv) Ensure that, the rights of an individual will be respected and their property and life will not be put under threat under any circumstances. Academic work must not pose a risk or danger to people or the environment. Necessary clearances and permits/licenses must be obtained while handling, storing and disposing of radioactive, toxic or harmful materials.
- (v) Follow ethical practices in publications/thesis/project reports etc. by checking plagiarism and by avoiding self-plagiarism. Be cautious to avoid so-called "predatory journals" which publish papers with minimal or no review. It is unethical to publish in such journals.
- (vi) Avoid data fraud and all unacceptable forms of data manipulation, such as adding or subtracting data points at will, editing images to produce a false result, creating images artificially and presenting them as data or using the same figure or table to describe different experiments. The conclusions claimed in a research paper must be genuine.
- (vii) Honestly claim authorship of documents. The list of authors in research papers, reviews, books, monographs or policy documents should not be manipulated to give undue credit to those who have not contributed ("honorary authorship") or deny credit to those who have contributed sufficiently.



Section 6: Procedures for Corrective Action

This Policy is envisaged to employ procedures for dealing with allegations of research misconduct, as well as any other kind of misconduct as described in this document, against its staff and students.

It is compulsory for researchers to adhere to norms of engineering practice and follow all safety guidelines. Researcher should take more pre-caution when human subjects are involved or design & development of products to be used on human subjects are involved. Institute strongly discourages the unethical practices or data collection, data analytics, data reproduction or drawing inference from the data.

(i) Corrective action:

If a publication or report/thesis is found to contain plagiarism or manipulated data, the concerned department must ensure that a correction or retraction is published in the same place as the original paper.

On the other side, if a decision is found to have been made based on a bias or conflict of interest, then it should be overturned and the process must be repeated from first step, if necessary.

In general, every effort must be made to ensure that an unethical action does not succeed in propagating false knowledge or incorrect decisions.

(ii) Punitive action

Should be as per the norms of regulating bodies, publication houses and government agencies.

FR. CONCEICAO RODRIGUES COLLEGE OF ENGINEERING
Fr. Agnel Ashram, Bandstand, Bandra (W), Mumbai - 400 050.

Ref.: CRCE / 2016 / 059


Date : February 5, 2015.

NOTICE

Intellectual Property Rights (IPR) Cell has been constituted in our Institute. This cell will provide guidance to students and faculties in IPR related matters. Constitution of IPR Cell is as follows:-

Sr.No	Name	
1	Dr.Bhushan Patil	Coordinator
2	Dr. Vasim Abdul Majid Shaikh	Member
3	Mr. Mahendra Chandrasingh Mehra	Member
4	Mrs. Binsy Joseph	Member
5	Mr. Vaibhav Vasant Godbole	Member

All interested students and teachers can take their help in IPR related matters.


(DR. SRIJA UNNIKRISHNAN)
PRINCIPAL

MOULDING ENGINEERS WHO CAN BUILD THE NATION

List of Patents Published / Granted in last 5 years (2017-18 to 2021-22)

Sl. No.	Patent Application No.	Status of Patent (Published / Granted)	Inventor/s Name	Title of the Patent	Applicant/s Name	Patent Filed Date	Patent Published Date / Granted Date	Patent Publication Number / Patent Granted Number
1	2020102342	Granted	Hitendra Vaishnav	a Home Aquarium Monitoring System	Hitendra Vaishnav	9/19/2020	10/14/2020	2020102342
2	296740	Granted	Ketaki Joshi, Dr. Bhushan Patil, Hitendra Vaishnav	Article for Image Acquisition and Measurement of Surface and Dimensional Quality	Ketaki Joshi	8/18/2017	7/19/2019	Journal No: 29/2019 and Journal Date: 19/07/2019 Design Number : 296740
3	2018210314 56 A	Published	Thikrul Gaurav, Dr. Jorapur Vedavyasrao	An Improved Fuel Jet Apparatus For A Carburetor	Dr. Jorapur Vedavyasrao	8/22/2018	10/12/2018	The Patent Office Journal No. 41/2018 Dated 12/10/2018



Australian Government

IP Australia

CERTIFICATE OF GRANT INNOVATION PATENT

Patent number: 2020102342

The Commissioner of Patents has granted the above patent on 14 October 2020, and certifies that the below particulars have been registered in the Register of Patents.

Name and address of patentee(s):

Pratik Kanani of Dwarkadas J. Sanghvi College of Engg. Mumbai Maharashtra 400056 India

Hitendra Vaishnav of Fr. Conceicao Rodrigues College of Engg. Mumbai Maharashtra 400050 India

Sudhir Bagul of Dwarkadas J. Sanghvi College of Engg. Mumbai Maharashtra 400056 India

Aniket Kore of Dwarkadas J. Sanghvi College of Engg. Mumbai Maharashtra 400056 India

Prasad Kawade of C-302, Akansha Apartment, Sainagar Vasai Road Maharashtra 401202 India

Chandana Khatavkar of A6, Sarita CHS, Plot No. 224, Sector 4, Charkop, Kandivali Mumbai Maharashtra 400067 India

Samira Nigrel of A/403, Gokul Residency, Kandarpada, B.P. Road, Dahisar Mumbai Maharashtra 400068 India

Archana Nanade of B-2-1/101, Cluster No.5, New Haven, Tata Housing Soc, Betegaon Boisar Maharashtra 401501 India

Nancy Nadar of St. John College of Engg. & Management Palghar Maharashtra 401404 India

Hetal Amrutiya of A-704, Shree Shashwat, Sant Mirabai road, Ghartan Pada-02, Dahisar Mumbai Maharashtra 400068 India

Vipul Gohil of Mukesh Patel School of Technology, Management & Engineering Mumbai Maharashtra 400056 India

Apeksha Shah of Founder, Aakaar Education, A/101-103, Sushmita Apt, Dewan Enclave, Evershine City Vasai Road Maharashtra 401208 India

Amit Sahu of B.K No. 1156/1, Near ACP office, Pawai Chowk Ulhasnagar Maharashtra 421003 India

Nishant Singh of Co-Founder Protrex LLP, A/703, Satyam Tower, Nilemore Gaon Nallasopara Maharashtra 401203 India

Nida Parkar of 303, A-21, Lisbon Building, Shashtri Nagar, Andheri Mumbai Maharashtra 400053 India

Title of invention:

A HOME AQUARIUM MONITORING SYSTEM

Name of inventor(s):

Kanani, Pratik; Vaishnav, Hitendra; Bagul, Sudhir; Kore, Aniket; Kawade, Prasad; Khatavkar, Chandana; Nigrel, Samira; Nanade, Archana; Nadar, Nancy; Amrutiya, Hetal; Gohil, Vipul; Shah, Apeksha; Sahu, Amit; Singh, Nishant and Parkar, Nida

Term of Patent:



Dated this 14th day of October 2020

Commissioner of Patents

PATENTS ACT 1990

The Australian Patents Register is the official record and should be referred to for the full details pertaining to this IP Right.



Australian Government

IP Australia

CERTIFICATE OF GRANT INNOVATION PATENT

Patent number: 2020102342

Eight years from 19 September 2020

NOTE: This Innovation Patent cannot be enforced unless and until it has been examined by the Commissioner of Patents and a Certificate of Examination has been issued. See sections 120(1A) and 129A of the Patents Act 1990, set out on the reverse of this document.



Dated this 14th day of October 2020

Commissioner of Patents

PATENTS ACT 1990

The Australian Patents Register is the official record and should be referred to for the full details pertaining to this IP Right.



सत्यमेव जयते

ORIGINAL

No. 77574

भारत सरकार
GOVERNMENT OF INDIA
पेटेंट कार्यालय
THE PATENT OFFICE

CERTIFICATE OF REGISTRATION OF DESIGN

Design No. 296740
Date 18/08/2017 12:07:28
Reciprocity Date*
Country

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 16-02 in respect of the application of such design to ARTICLE FOR IMAGE ACQUISITION AND MEASUREMENT OF SURFACE AND DIMENSIONAL QUALITY in the name of 1.KETAKI NARENDRA JOSHI, FR. CONCEICAO RODRIGUES COLLEGE OF ENGINEERING, FR. AGNEL ASHRAM, BANDSTAND, BANDRA (W) - 400050, MAHARASHTRA, INDIA. 2. BHUSHAN TRYAMBAK PATIL, FR. CONCEICAO RODRIGUES COLLEGE OF ENGINEERING, FR. AGNEL ASHRAM, BANDSTAND, BANDRA (W) - 400050, MAHARASHTRA, INDIA. 3. HITENDRA BABOODAS VAISHNAV, FR. CONCEICAO RODRIGUES COLLEGE OF ENGINEERING, FR. AGNEL ASHRAM, BANDSTAND, BANDRA (W) - 400050, MAHARASHTRA, INDIA.

in pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

INTELLECTUAL

Controller General of Patents, Designs and Trade Marks

PROPERTY INDIA

TRADE MARKS

GEOGRAPHICAL INDICATIONS

*The reciprocity date (if any) which has been allowed and the name of the country.

Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules, be extended for a further period of five years.

This Certificate is not for use in legal proceedings or for obtaining registration abroad

ADV. ANAND MAHURKAR,
KRISHNA & SAURASTRI ASSOCIATES LLP, 74/F,
VENUS, WORLI SEA FACE, MUMBAI 400 018

Date of Issue 09/07/2019 14:00:54

पेटेंट कार्यालय
शासकीय जर्नल

OFFICIAL JOURNAL
OF
THE PATENT OFFICE

निर्गमन सं. 41/2018

शुक्रवार

दिनांक: 12/10/2018

ISSUE NO. 41/2018

FRIDAY

DATE: 12/10/2018

पेटेंट कार्यालय का एक प्रकाशन
PUBLICATION OF THE PATENT OFFICE

(12) PATENT APPLICATION PUBLICATION

(21) Application No.201821031456 A

(19) INDIA

(22) Date of filing of Application :22/08/2018

(43) Publication Date : 12/10/2018

(54) Title of the invention : AN IMPROVED FUEL JET APPARATUS FOR A CARBURETOR

(51) International classification	:F02M	(71)Name of Applicant :
(31) Priority Document No	7/00	1)DR. JORAPUR VEDAVYASRAO
(32) Priority Date	:NA	Address of Applicant :C/o: Fr. Conceicao Rodrigues College
(33) Name of priority country	:NA	of Engineering Bandra 400050. Maharashtra India
(86) International Application No	:NA	2)THIKRUL GAURAV
Filing Date	:NA	(72)Name of Inventor :
(87) International Publication No	: NA	1)THIKRUL GAURAV
(61) Patent of Addition to Application Number	:NA	2)DR. JORAPUR VEDAVYASRAO
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

A Fuel Jet apparatus (400) for a carburetor comprising a main jet body (470) capable of being secured to a carburetor, a needle (450) capable of regulating fuel flow through the main jet channel (405); wherein the main jet body (470) has a plurality of fuel channels (420 & 435) concealed within its body. The channels connect the inner surface (465) of the main jet body (470) to the carburetor venturi (455) thereby enabling fuel spray into the carburetor. The fuel flow through the concealed fuel channels (420 & 435) is controlled by a spring-bush mechanism (480) which comprises of at least one spring (485), a bush (475) and a stopper (483). The Fuel Jet apparatus (400) advantageously eliminates the need for a plurality of ports and piping for needle jets and pilot jets whilst ensuring that the engine operates more efficiently during idling operations as also other operations which the engine is required to perform with significantly less emissions. FIGURE 3

No. of Pages : 23 No. of Claims : 9

University of Mumbai

Phone - 022-2270 3248

Phone - 022-2270 8729

E-mail - universitythesis2011@gmail.com



Thesis Section,

UNIVERSITY of MUMBAI,

Fort Campus, M.G. Road,

Mumbai - 400 032.

Th./ICD/2018-19/ 3684

18th November, 2018.

- ✓ The Principal.
- St. Francis Xavier Pilar's,
Fr. Conceicao Rodrigues College of Engineering,
Fr. Agnel Ashram, Bandstand,
Bandra (W), Mumbai - 400 050.

Sub :- Your Proposal for **Continuation of Recognition** to enroll students for **Ph.D.(Science & Technology)** degree course in the subjects of **Mechanical Engineering and Electronics Engineering** from the Academic Year 2018-19.

Ref. :- Your letter No.CRCE/2017/438, dated 26th September, 2017.

Madam / Sir,

With reference to the subject above, I am directed by the Hon'ble Pro-Vice-Chancellor to inform you that the report of the Local Inquiry Committee for **Continuation of Recognition** for the **Ph.D.(Science & Technology)** degree course in the subjects of **Mechanical Engineering and Electronics Engineering** was placed before the Board of Deans at its meeting held on **4th September, 2018**, vide item No.34, when it was resolved as under :-


"be granted Continuation of Recognition to enroll 10 students Ph.D.(Technology) degree course in the subject of Mechanical Engineering and Electronics Engineering from the Academic Year 2018-19 to 2022-23 subject to yearly review of compliance of conditions stipulated by the LIC Committee & recovery of dues towards recognition fees, if any & the same be recommended to Vice-Chancellor for his consideration & approval."

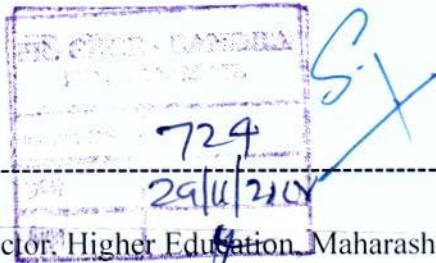
Pursuant to the above resolution of the Board of Deans, I am to inform you that the College/Institute has been granted permission for **Continuation of Recognition** to enroll students for the **Ph.D.(Science & Technology)** degree course in the subjects of **Mechanical Engineering (10 ten Students) and Electronics Engineering (14 fourteen students)** from the Academic Year to 2018-19 to 2022-23.

You are therefore, requested to pay the remaining fees of Rs.4,50,000/- (Rupees Four Lakh Fifty Thousand Only), towards the Continuation of Recognition from the academic year 2020-21 to 2022-23, within 15 days, as a precondition for approval of continuation of recognition.

Further, you are also requested to submit the proposal for continuation of recognition for the academic year 2023-24 onwards, on or before 30th September, 2022.

Yours,


15/11/18
Deputy Registrar
(Thesis Section)



Copy to -

1. The Jt. Director, Higher Education, Maharashtra State, Mumbai Region, Elpistone Technical High School Building, Mahapalika Marg, Mumbai - 400 001.
2. The Assistant Registrar, A.P.D. Section, for information and it may be treated as an action taken report on the resolution of vide item No.34 of the Board of Deans meeting held on 4th September, 2018.
3. The Co-Ordinator, University Computerisation Centre, University of Mumbai, Idol Building, Vdyanagari, Kalina, Mumbai - 400 098.

University of Mumbai



No.PG/2/ICD/ 2017-18/ 171
Mumbai- 400 032
13th October, 2017

To,
Dr. (Smt.) Prabhu Sapna Uday
A/31, Savita CHS,
Off. J.P. Road,
Seven Bungalows, Andheri (W),
Mumbai – 400 061

Sir/ Madam,

This has reference to your application dated 9th June, 2017 which was forwarded through the Principal, **Fr. Conceicao Rodrigues College of Engineering, Fr. Agnel Ashram Bandstand, Bandra (W), Mumbai -400 050**, for recognition as a teacher of the University.

In this connection, I am directed to inform you that you have been granted recognized as a teacher to guide student for the **Ph.D.** degree in the subject of **Electronics Engineering** of the University with effect from 28th July, 2017 upto superannuation of your services through **Fr. Conceicao Rodrigues College of Engineering, Fr. Agnel Ashram Bandstand, Bandra (W), Mumbai -400 050**.

Further, a copy of the Ordinances prescribing duties of recognize teacher of the University is enclosed, for your perusal.

Yours faithfully,

Assistant Registrar
Post Graduate Studies Section

University of Mumbai



No. PG/I.C.D./2014-15/ 2480
Mumbai - 400 032.

30th March, 2015.

To,
Dr. Surve Sunil Krishnaji
C - 185,
Sector-4, Airoli,
Navi Mumbai - 400 708.

Sir/ Madam,

With reference to your application dated 6th August, 2014, through the Principal, **Fr. Conceicao Rodrigues College of Engineering, Fr. Agnel Ashram, Bandstand, Bandra (W), Mumbai - 400 050**, for recognition as a teacher of the University, I am directed to inform you that you have been recognized as a teacher of the University for the **Ph.D. (Tech.) Degree in Electronics Engineering** with effect from **5th March, 2015**.

A copy of the Ordinances prescribing duties of teacher of the University is enclosed.

Yours faithfully,

Sd/-
Offg. Deputy Registrar
Post Graduate Studies Section

No. PG/ICD/2014-15/ 2480

30th March, 2015.

✓ Copy forwarded with compliments to the Principal, **Fr. Conceicao Rodrigues College of Engineering, Fr. Agnel Ashram, Bandstand, Bandra (W), Mumbai - 400 050**, for information.

FR. CRCE - BANDRA INWARD MAIL	
Inward No.	106
Date	10-4-2015
Sign	<i>[Signature]</i>

[Signature]
Offg. Deputy Registrar
Post Graduate Studies Section

University of Mumbai



No. PG/I.C.D./2014-15/ 19643
Mumbai - 400 032.

30th March, 2015.

To,
Dr. Bhoir Deepak Vishnu
102, Akanksha,
The Bank of Baroda
Thane Employees CHS Ltd.,
Panchpakhadi,
Thane - 400 601.

Sir/ Madam,

With reference to your application dated 6th August, 2014, through the Principal, **Fr. Conceicao Rodrigues College of Engineering, Fr. Agnel Ashram, Bandstand, Bandra (W), Mumbai - 400 050**, for recognition as a teacher of the University, I am directed to inform you that you have been recognized as a teacher of the University for the **Ph.D. (Tech.) Degree in Electronics Engineering** with effect from **5th March, 2015**.

A copy of the Ordinances prescribing duties of teacher of the University is enclosed.

Yours faithfully,

Sd/-
Offg. Deputy Registrar
Post Graduate Studies Section

No. PG/ICD/2014-15/ 19643

30th March, 2015.

✓ Copy forwarded with compliments to the Principal, **Fr. Conceicao Rodrigues College of Engineering, Fr. Agnel Ashram, Bandstand, Bandra (W), Mumbai - 400 050**, for information.

FR. CRCE - BANDRA INWARD MAIL	
Inward No.	105
Date	10-4-2015
Sign	

Offg. Deputy Registrar
Post Graduate Studies Section

University of Mumbai



No. PG/L.C.D./2015-16/ 51237
Mumbai - 400 032.

15th June, 2015.

To,
Dr. Rathod Surendra Singh Sardarsingh
202 - A, Plot : 83,
Gorai Shree Ganesh Chs,
Gorai - 2, Borivali (W),
Mumbai.

Sir/ Madam,

With reference to your application dated 13th March, 2015, through Sardar Patel Institute of Technology, Bhavan's Campus, Munshi Nagar, Andheri (West), Mumbai - 400 058, for recognition as a teacher of the University, I am directed to inform you that you have been recognized as a teacher of the University for the Ph.D. (Tech.) Degree in Electronics Engineering with effect from 25th May, 2015.

A copy of the Ordinances prescribing duties of teacher of the University is enclosed.

Yours faithfully,

Offg. Deputy Registrar
Post Graduate Studies Section

University of Mumbai



No. PG/I.C.D./2014-15/ 28050
Mumbai - 400 032.

3rd April, 2014.
mny

To,
Dr. Rathod Surendrasingh S.
202-A, Plot :83,
Gorai Shree Ganesh,
Gorai - 2, Borivali (West),
Mumbai - 400 092.

Sir/ Madam,

With reference to your application dated 13th March, 2013, through the Principal, Sardar Patel Institute of Technology, Mumbai - 400 058, for recognition as a teacher of the University, I am directed to inform you that you have been recognized as a teacher of the University for the Ph.D. Degree in Electronics & Telecommunication Engineering with effect from 11th April, 2014.

A copy of the Ordinances prescribing duties of teacher of the University is enclosed.

Yours faithfully,

Offg. Deputy Registrar
Post Graduate Studies Section

University of Mumbai



No. PG/2/I.C.D./2015-16/ 6447
Mumbai - 400 032.
30th June, 2015.

To,
The Principal,
Fr. Conceicao Rodrigues College of Engineering,
Fr. Agnel Ashram,
Bandstand, Bandra (W),
Mumbai - 400 050.

Sir,

With reference to your letter No. CRCE/2015/287 dated 20th May, 2015, regarding Continuation of Recognition as guide for Ph.D. (Tech.) Degree of Dr. Patil Bhushan Tryambak in the subject of Mechanical Engineering. I am to inform you that the matter was placed before the Board of University Teaching and Research at its meeting held on 25th May, 2015 vide Item No. 07 when the Borad of University Teaching and Research resolved as under :-

Resolved that Continuation for recognition as guide for Ph.D. (Tech.) Degree in Mechanical Engineering be granted from Fr. Conceicao Rodrigues College of Engineering, Bandra (W), Mumbai - 400 050.

Ph.D. (Tech.) Degree in Mechanical Engg. :-

Name of the Teacher	Recommendations
Dr. Patil Bhushan Tryambak Assistant Professor, Fr. Conceicao Rodrigues College of Engineering, Bandstand, Bandra (W), <u>Mumbai - 400 050.</u>	Continuation for recognition be granted as Ph.D. guide from Fr. Conceicao Rodrigues College of Engineering, Bandra.

In pursuance of the above resolution passed by the Board of University Teaching and Research, the continuation of Ph.D. Guideship of Dr. Patil Bhushan Tryambak in the subject of Mechanical Engineering has been granted from the date of his joining in Fr. Conceicao Rodrigues College of Engineering, Fr. Agnel Ashram, Bandstand, Bandra (W), Mumbai - 400 050.

Yours faithfully,

Offg. Deputy Registrar

University of Mumbai



No. Thesis/ICD/2022-23/ 1068
Mumbai- 400 098
24th June, 2022

To,
Dr. Shaikh Vasim Abdul Majid
A/402 Chandresh Arcade CHS Ltd,
Lodha Road, Opposite Laxmi Park,
Mira Road (E),
Thane – 401 107

Sir/ Madam,

This has reference to your application dated 10th December, 2021 which was forwarded through the Principal, Fr. Conceicao Rodrigues College of Engineering, Fr. Agnel Ashram Bandstand, Bandra (W), Mumbai – 400 050, for recognition as a teacher of the University.

In this connection, I am directed to inform you that you have been granted recognition as a teacher to guide student for the Ph.D. degree in the subject of Mechanical Engineering of the University with effect from 02nd May, 2022 upto superannuation of your services through Fr. Conceicao Rodrigues College of Engineering, Fr. Agnel Ashram Bandstand, Bandra (W), Mumbai – 400 050.

Further, a copy of the Ordinances prescribing duties of recognized teacher of the University is enclosed, for your perusal.

Yours faithfully,

W. J. Alawade

Deputy Registrar 23/6/22
Research Administration & Promotion Cell

Copy forwarded with compliments for information and necessary action:-

- 1) The Principal, Fr. Conceicao Rodrigues College of Engineering, Fr. Agnel Ashram Bandstand, Bandra (W), Mumbai – 400 050.
- 2) The Deputy Registrar, AAMS, University of Mumbai, Fort Campus, Mumbai- 400 032.
This is action taken report of the Board of Deans at its meeting held on 02nd May, 2022
vide item no. 3.25.

University of Mumbai



No.PG/ICD/2019-20/ 1956
Mumbai- 400 032
09th January, 2020

To,
Dr. (Smt.) Deshmukh Sujata Prashant
A-502, Royal Tower,
Sector - 8A,
Airoli,
Navi Mumbai

Sir/ Madam,

This has reference to your application dated 17th March, 2017 which was forwarded through the Principal, Fr. Conceicao Rodrigues College of Engineering, Fr. Agnel Ashram, Bandstand, Bandra (W), Mumbai - 400 050, for recognition as a teacher of the University.

In this connection, I am directed to inform you that you have been granted recognized as a teacher to guide student for the Ph.D. degree in the subject of **Computer Engineering** of the University with effect from 05th December, 2019 upto superannuation of your services through Fr. Conceicao Rodrigues College of Engineering, Fr. Agnel Ashram, Bandstand, Bandra (W), Mumbai - 400 050.

Further, a copy of the Ordinances prescribing duties of recognize teacher of the University is enclosed, for your perusal.

Yours faithfully,

P. S. Dhurmatia

Assistant Registrar
UG & PG Section



Fr. Conceicao Rodrigues College of Engineering
Fr. Agnel Ashram, Bandstand, Bandra (W), Mumbai – 400050

Research Centre Statistics (as of 6/10/2022)

Research Centre	Electronics Engineering	Mechanical Engineering
Year of Introduction	2014	2015
Sanctioned Intake	14	10
No. of Candidates pursuing Ph.D.	7	6
No. of Candidates Registered	5	5
No. of Candidates with Thesis Submitted	1	1
No. of Candidates with Ph.D. Awarded	7	1
Total Vacancies	7	4

Electronics Engineering

Sr. No	Name of Guide	Designation	No. of Candidates with Ph.D. Awarded from the Research Centre	No. of Candidates with Thesis Submitted from the Research Centre	No. of Ph.D. Candidates currently Admitted to the Research Centre	Total Ph.D. Candidates Admitted to date
1	Dr. Deepak V. Bhoir	Professor	02	-	02	15
2	Dr. Sunil K. Surve	Professor	01	-	02	
3	Dr. Sapna U. Prabhu	Professor	00	-	03	
4	Dr. S S Rathod	Professor	-	-	-	
5	Dr. Srija Unnikrishnan	Professor	04	01	-	

Mechanical Engineering

Sr. No	Name of Guide	Designation	No. of Candidates with Ph.D. Awarded from the Research Centre	No. of Candidates with Thesis Submitted from the Research Centre	No. of Ph.D. Candidates currently Admitted to the Research Centre	Total Ph.D. Candidates Admitted to date
1	Dr. Bhushan T. Patil	Professor	01	01	06	08
2	Dr. Vasim Shaikh	Assistant Professor	-	-	-	

Details of Ph.D. Candidates

Electronics Engineering

S. No.	Name of Ph.D. Scholar	Date of Admission	Date of Registration	Date of Thesis Submission	Date of Defense	Supervisor	Research Advisory Committee Members			
							Convenor (HOD)	Supervisor / Guide	Expert1	Expert2
1	Monica Khanore	1-Dec-13	20-Nov-15	12-Jan-21	-	Dr. Srijia Unnikrishnan	Dr. Sapna Prabhu	Dr. Srijia Unnikrishnan	-	B.K. Lande
2	Sanjeev Ghosh	1-Dec-13	20-Nov-15	9-Jan-20	24-Dec-21	Dr. Srijia Unnikrishnan	Dr. Sapna Prabhu	Dr. Srijia Unnikrishnan	-	Dr. Deven Shah
3	Ami Munshi	1-Jan-15	1-Oct-16	24-Feb-20	5-May-22	Dr. Srijia Unnikrishnan	Dr. Sapna Prabhu	Dr. Sapna Prabhu	-	Dr. Shivraj Rathod
4	Siddharth Gautam	1-Jan-15	11-May-16	21-Nov-20	21-Jun-22	Dr. Srijia Unnikrishnan	Dr. Sapna Prabhu	Dr. Srijia Unnikrishnan	-	Dr. Archana Bhise
5	Nandana Prabhu	1-Sep-15	2-Jan-17	17-Jan-20	17-Jan-22	Dr. D. V. Bhoir	Dr. Sapna Prabhu	Dr. D. V. Bhoir	Dr. Sunil Surve	Prof. Kishore Kinage
6	Preeti Jain	1-Sep-15	18-Apr-17	24-Jan-20	2-Mar-22	Dr. S. K. Surve	Dr. Sapna Prabhu	Dr. S. K. Surve	Dr. N. M. Singh	Dr. J. M. Nair
7	Seema Talmale	1-Sep-15	25-Jan-17	24-Jan-20	5-Jul-22	Dr. Srijia Unnikrishnan	Dr. Sapna Prabhu	Dr. Srijia Unnikrishnan	-	Dr. B. K. Lande
8	Prashant V. Kasambe	1-Dec-15	27-Mar-17	31-Dec-21	8-Jul-22	Dr. D. V. Bhoir	Dr. Sapna Prabhu	Dr. Srijia Unnikrishnan	Dr. Sunil Surve	Dr. Nitin Kale
9	Jayen Modi	1-Feb-15	24-Sep-18	-	-	Dr. Sunil Surve	Dr. Sapna Prabhu	Dr. Sunil Surve	Dr. Srijia Unnikrishnan	Dr. Faruk kazi
10	Binsy Joseph	1-Feb-18	7-Feb-21	-	-	Dr. D. V. Bhoir	Dr. Sapna Prabhu	Dr. D. V. Bhoir	Dr. Sunil Surve	Dr. Sushil Thale
11	Ms. Sushma Nagdeote	1-Feb-19	6-Mar-21	-	-	Dr. Sapna Prabhu	Dr. Sapna Prabhu	Dr. Sapna Prabhu	Dr. D. V. Bhoir	Dr. Kishore Kinage
12	Shridhar Ramkrishna Sahu	1-Feb-19	7-May-21	-	-	Dr. D. V. Bhoir	Dr. Sapna Prabhu	Dr. D. V. Bhoir	Dr. Sunil Surve	Dr. S. S. Rathod



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13	Mr. Rohan Appasaheb Borgalli	1-Feb-19	7-May-21	-	-	Dr. Sunil Surve	Dr. Sapna Prabhu	Dr. Sunil Surve	Dr. Sunil Surve	Dr. Deepak Garg
14	Zafar khan	1-Jun-21	-	-	-	Dr.Sapna Prabhu	Dr. Sapna Prabhu	Dr.Sapna Prabhu	-	-
15	Devanand K Bathe	1-Jun-21	-	-	-	Dr. Sapna Prabhu	Dr. Sapna Prabhu	Dr. Sapna Prabhu	-	-

Research Topics

S.No.	Name of Ph.D. Scholar	Supervisor	Title of Thesis
1	Monica Khanore	Dr. Srija Unnikrishnan	Interference Canceller for DS-CDMA System
2	Sanjeev Ghosh	Dr. Srija Unnikrishnan	Queuing Theoretic Approach to Wireless Sensor Networks for the Internet of Things
3	Ami Munshi	Dr. Srija Unnikrishnan	Channel Estimation in MIMO OFDM Systems
4	Siddharth Gautam	Dr. Srija Unnikrishnan	Vertical handover decision algorithm in Vehicular Network
5	Nandana Prabhu	Dr.D.V.Bhoir	An automated screening system for classification of Diabetic Retinopathy and investigation if its association with pathological parameters
6	Preeti Jain	Dr S.K.Surve	Coordination And Synchronization of Shared Resources for MultiAgent Systems
7	Seema Talmale	Dr. Srija Unnikrishnan	Decoding Algorithm for Error Correcting Codes with Syndrome Polynomial
8	Prashant V. Kasambe	Dr. D. V. Bhoir	Performace Evaluation of MEMS Devices for various Geometric Structures
9	Jayen Modi	Dr. Sunil Surve	congestion mitigation & Allleviation in swireless sensor networks



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10	Binsy Joseph	Dr. D. V. Bhoir	Electric Vehicle Battery Management and prediction
11	Ms. Sushma Nagdeote	Dr. Sapna Prabhu	An Enhanced Digital Imaging Technique for Predictions in Cancer.
12	Shridhar Ramkrishna Sahu	Dr. D. V. Bhoir	High Resolution Data Converters with Improved Accuracy for Low Power Biomedical Applications
13	Mr. Rohan Appasaheb Borgalli	Dr. Sunil Surve	Learning Algorithm for Facial Expression Recognition (FER) System
14	Zafar khan	Dr. Sapna Prabhu	<i>Topic Yet to be Decided</i>
15	Devanand K Bathe	Dr. Sapna Prabhu	<i>Topic Yet to be Decided</i>

Mechanical Engineering

S. No.	Name of Ph.D. Scholar	Date of Admission	Date of Registration	Date of Thesis Submission	Date of Defense	Supervisor	Research Advisory Committee Members			
							Chairperson (HOD)	External Examiner1	External Examiner2	Convenor (Guide)
1	Geetha Subramanian	30-Sep-15	24-Nov-17	18-Aug-21	-	Dr. Bhushan T. Patil	Dr. Bhushan T. Patil	Dr. P D Deshmukh	Dr. Vivek Yakkundi	Dr. Bhushan T. Patil
2	Ketaki Narendra Joshi	27-Jul-16	26-Apr-17	24-Oct-19	12-Jun-20	Dr. Bhushan T. Patil	Dr. Bhushan T. Patil	Dr. P D Deshmukh	Dr. Vivek Yakkundi	Dr. Bhushan T. Patil
3	Devarkonda Satya Sundara Sudhakar	27-Jul-16	18-Dec-17	-	-	Dr. Bhushan T. Patil	Dr. Bhushan T. Patil	Dr. P D Deshmukh	Dr. Vivek Yakkundi	Dr. Bhushan T. Patil
4	Deepika Singh Singraur	27-Jul-16	19-Dec-17	-	-	Dr. Bhushan T. Patil	Dr. Bhushan T. Patil	Dr. S. U. Bokade	Dr. C. M. Chaudhari	Dr. Bhushan T. Patil
5	Dipali Kisan Bhise	27-Jul-16	4-Sep-18	-	-	Dr. Bhushan T. Patil	Dr. Bhushan T. Patil	Dr. S. U. Bokade	Dr. C. M. Chaudhari	Dr. Bhushan T. Patil
6	VeerBhadra Rao D.N.Miriyala	27-Jul-16	5-Oct-18	-	-	Dr. Bhushan T. Patil	Dr. Bhushan T. Patil	Dr. S U Bokade	Dr. Ramesh Lekurwale	Dr. Bhushan T. Patil
7	Meera Bharat Kokate	16-Mar-19	12-Jul-21	-	-	Dr. Bhushan T. Patil	Dr. Bhushan T. Patil	Dr. V K Sunnapwar	Dr. D P Tambuskar	Dr. Bhushan T. Patil
8	Zoya Rizvi	5-Apr-22	-	-	-	Dr. Bhushan T. Patil	-	-	-	-



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Research Topics

S.No.	Name of Ph.D. Scholar	Supervisor	Title of Thesis
1	Geetha Subramanian	Dr. Bhushan T. Patil	Improving Operational Efficiency of Micro Small and Medium Enterprises (MSME) using Collaborative manufacturing, Cloud Technology and Industry 4.0
2	Ketaki Narendra Joshi	Dr. Bhushan T. Patil	Design and Development of Machine Vision Systems for Inspection and Quality Control in Manufacturing Industry
2	Devarkonda Satya Sundara Sudhakar	Dr. Bhushan T. Patil	Investigations into interpolators for arbitrary contours on Open CNC system
3	Deepika Singh Singraur	Dr. Bhushan T. Patil	Performance Enhancement of Plastic Injection Molding using Conformal cooling Channels
4	Dipali Kisan Bhise	Dr. Bhushan T. Patil	Investigation and Analysis of Micro Lubrication in Milling Operation
5	VeerBhadra Rao D.N.Miriyala	Dr. Bhushan T. Patil	Investigation and Analysis of Micro Lubrication in Milling Operation
6	Meera Bharat Kokate	Dr. Bhushan T. Patil	Artificial Intelligence Based System for Quality Assessment of Injection Moulded Components
7	Zoya Rizvi	Dr. Bhushan T. Patil	<i>Topic Yet to be Decided</i>

Annual Report 2021-22 IIC- FrCRCE

A. About IIC Institute

Vision of IIC established at the Institute

“Moulding Engineers Who Can Build The Nation”

Mission of IIC established at the Institute

To Facilitate a platform for innovative minds to transform their ideas into viable business propositions to start a business venture.

Journey of IIC established at the Institute

IIC-FrCRCE is established in November 2018 with objectives to create a vibrant local innovation ecosystem to develop innovative mindset and nurture the innovative ideas of technology students by providing support for start-up mechanism. The IIC-FrCRCE team is formed comprising the members from all departments along with startup cell, E-cell, IPR cell, Internship cell coordinators and students.

The IIC–FrCRCE initiated various innovation, start-up, entrepreneurship related **activities** such as Workshops, Boot Camps online, Seminars, Hackathons, Mini Challenges, success stories and interactions with professionals, Alumni Entrepreneurs in the institute. The main events are **Idea Competition, PoC Competition, Business Model Canvas and Demo Day**. IIC celebrated most of the **celebration** activities announced by MOE. The top three teams of Idea Competition are felicitated during the annual function with **best innovation prize**. The student cell organizing startup and innovation activities enthusiastically is awarded with **Innovation Trophy**. The IIC president and NISP coordinator have conducted session on innovation and creativity for First Year students **Induction Program**. Nominated Faculty of CRCE representing all departments have completed Basic Level and Advanced Level **IA Training**. These Faculty have Proactively mentored students by conducting session in different domains required to build a startup.

In continuation with IIC activities, our Institute has joined the Campaign of implementing National Innovation and Startup Policy (**NISP**) in Higher Educational Institutions (HEI) initiated by MoE Innovation Cell in June 2020. We have successfully completed the policy formulation and in the Policy implementation stage. The action plan is prepared. NISP awareness session is conducted by NISP coordinator Prof. Swati Ringe to motivate and understand the faculty and students on 6th January 2021. NISP dedicated web page is created on the college website for reference.



Year 2020-2021 4 Star Certificate



Certificate No : 857

Issued On : 2022-01-03

Year 2021-2022 - IIC-FrCRCE Activities snapshot



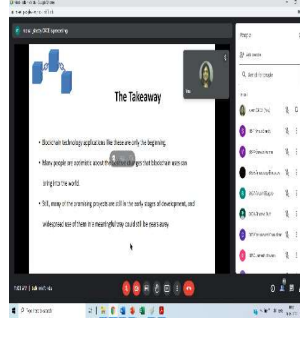
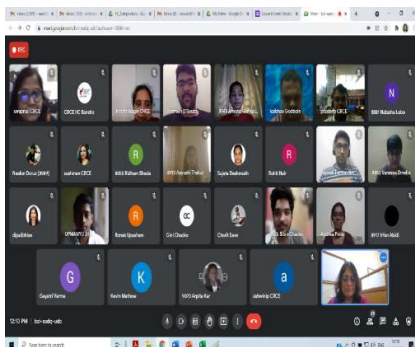
IDEA COMPETITION IN 4 PHASES

IDEA COMPETITION POC COMPETITION BUSINESS_MODEL_CANVAS DEMO DAY



First Meeting-13 Sept 2021

Workshops/Seminars



Mentoring SIH Students

Felicitation of Mentor and Winning team



Field Visit

Idea competition

Smart India Hackathon teams



INNOVATION AMBASSADORS MENTORING THE STUDENTS

<p align="center">FR. CONCEICAO RODRIGUES COLLEGE OF ENGINEERING FR. AGNEL ASHRAM BANDRA (WEST)</p> <p align="center">Creativity</p> <p align="center">SPEAKER PROF. ROSHNI PADATE - ASSISTANT PROFESSOR (COMPUTER DEPARTMENT)</p> <p>DATE : 24TH JANUARY 2022 TIME: 6.30 PM – 7.30 PM PLATFORM : GOOGLE MEET(https://meet.google.com/ojr-qjun-oua)</p> 	<p align="center">FR. CONCEICAO RODRIGUES COLLEGE OF ENGINEERING FR. AGNEL ASHRAM BANDRA (WEST)</p> <p align="center">Innovation And Design Thinking</p> <p align="center">SPEAKER PROF. SWATI RINGE (IISF COORDINATOR) IIC MEMBER ASSISTANT PROFESSOR (COMPUTER DEPARTMENT)</p> <p>DATE : 1ST FEBRUARY 2022 TIME: 2:00 PM Onwards PLATFORM : GOOGLE MEET(https://meet.google.com/nbk-ofkf-brn)</p> 
<p align="center">FR. CONCEICAO RODRIGUES COLLEGE OF ENGINEERING FR. AGNEL ASHRAM BANDRA (WEST)</p> <p align="center">Innovation And Entrepreneurship</p> <p align="center">SPEAKER PROF. GARIMA TRIPATHI</p> <p>DATE : 22TH JANUARY 2022 PLATFORM : GOOGLE MEET TIME : 11:00 AM - 12:00 PM</p>  	<p align="center">IIC-FCRCE Presents</p> <p align="center">IDEATION - BLOCKCHAIN</p> <p align="center">Prof. Monali Shetty</p> <p>Date: 31/01/2022 Time: 10:15am onwards Platform: Google Meet</p> <p>MEET LINK: </p> 
<p align="center">FR. CONCEICAO RODRIGUES COLLEGE OF ENGINEERING FR. AGNEL ASHRAM BANDRA (WEST)</p> <p align="center">Business Model Canvas</p> <p align="center">SPEAKER PROF. KRANTI WAGLE IIC-FCRCE PRESIDENT (AI & DS DEPARTMENT)</p> <p>DATE : 2ND FEBRUARY 2022 TIME: 2:30 PM - 3:30 PM PLATFORM ; GOOGLE MEET</p> 	<p align="center">FR. CONCEICAO RODRIGUES COLLEGE OF ENGINEERING FR. AGNEL ASHRAM BANDRA (WEST)</p> <p align="center">Business Plan Real Startup Case Study</p> <p align="center">SPEAKER PROF. HITENDRA VAISHANV ASSISTANT PROFESSOR(MECHANICAL DEPARTMENT)</p> <p>DATE : 3RD FEBRUARY 2022 TIME: 2:30 PM Onwards PLATFORM : GOOGLE MEET (https://meet.google.com/ydu-khqc-fpb)</p> 
<p align="center">Fr. Conceicao Rodrigues College of Engineering Fr. Agnel Ashram Bandra (West)</p> <p align="center">Phases of Startup</p> <p align="center">Date : 4th February, 2022 Time : 5 PM onwards Platform : Google Meet</p> <p align="center">Speaker Prof. Prajakta Bhargale Innovation Ambassador</p>  	<p align="center">Fr. Conceicao Rodrigues College of Engineering Fr. Agnel Ashram Bandra (West)</p> <p align="center">Minimum Vaible Product</p> <p align="center">Speaker Prof. Saurabh Kulkarni Assistant Professor</p> <p align="center">Platform: Google Meet Link: meet.google.com/tbh-mhp-vhd DATE: 5th FEB 2022 TIME: 10AM - 11AM</p> 
<p align="center">Fr. Conceicao Rodrigues College of Engineering Bandra</p> <p align="center">Session on How to plan for Start-up and legal & Ethical Steps</p> <p align="center">Speaker Prof. Swati Ringe</p> <p>Date : 7 February 2022 Time : 11:00 AM Platform : Google Meet</p> 	<p align="center">FR. CONCEICAO RODRIGUES COLLEGE OF ENGINEERING FR. AGNEL ASHRAM BANDRA (WEST)</p> <p align="center">Startup Ecosystem</p> <p align="center">SPEAKER PROF. HEENA PENDHARI INNOVATION ACTIVITY CO-ORDINATOR</p> <p>DATE : 8TH FEBRUARY 2022 TIME: 2:00pm-3:00pm PLATFORM : GOOGLE MEET(https://meet.google.com/wbv-eiyc-jcs)</p> 
<p align="center">FR. CONCEICAO RODRIGUES COLLEGE OF ENGINEERING FR. AGNEL ASHRAM BANDRA (WEST)</p> <p align="center">Branding and Promotion for Startups</p> <p align="center">SPEAKER PROF. SANGEETA PARSHIONIKAR IIC SOCIAL MEDIA CORDINATOR</p> <p>DATE : 10TH FEBRUARY 2022 TIME: 5:00pm-6:00pm PLATFORM : GOOGLE MEET(https://meet.google.com/zdr-jdij-ukm)</p> 	<p align="center">Fr. Conceicao Rodrigues College of Engineering Fr. Agnel Ashram Bandra (West)</p> <p align="center">Perfect Pitch Deck Presentation</p> <p align="center">Platform: Google Meet Link: meet.google.com/sxh-cske-aqb DATE: 9th FEB 2022 TIME: 1:30PM - 2:30PM</p> <p align="center">Speaker Prof. Vaibhav Godbole Assistant Professor</p> 

TECHNICAL EVENTS CRECENDO – HACKATHON, MECHATHON, ELEXATHON





Diversified representation in the IIC established at the institute from industry, Interdisciplinary & Departments/ Units etc. (Academic Year – 2021-2022)

The Institute have four departments: Mechanical Department, Electronics and Computer Science Department(ECS), Computer Engineering department and Artificial Intelligence and Data Science.

Position	Name	Department
Chairman	Dr. Surendra Rathod	PRINCIPAL
President	Prof. Kranti Wagle	Computer Engg. Department
Vice President	Prof. Ashwini Pansare	Computer Engg. Department
Convener	Prof. Swapnali Mahadik	AI and DS Department
NISP Co-ordinator	Prof. Swati Ringe	AI and DS Department
Innovation Activity Co-ordinator	Prof. Heena Pendhari	ECS Department
Startup Activity Co-ordinator	Dr. V. S. Jorapur	Production Department
Internship Activity Coordinator	Prof. Prachi Patil	Computer Engg. Department
IPR Activity Coordinator	Dr. Bhushan Patil , Prof. Deepali Bhise	Production Department
Social Media Coordinator	Prof. Sangeeta Parshionikar	Computer Department
ARIIA Coordinator	Dr. D.V Bhoir	ECS Department
NIRF Co-ordinator	Prof. Ketaki Joshi	Production Department
E-Cell in-charge	Prof. Prajakta Bhangale	ECS Department
Tinkering Lab	Prof. Saurabh Kulkarni	AI and DS Department
Member	Prof. Vaibhav Godbole	ECS Department
Member	Prof. Prajakta Dhamnaskar	AI and DS Department
Innovation Coordinator (Student)	Ridham Bheda	Computer Engg. Department
Startup Coordinator (Student)	Divita Phadakale	Computer Engg. Department
IPR Coordinator	Dan Fernandes	Computer Engg. Department
Social Media Coordinator	Yukta Wagh	ECS Department
Internship Coordinator	Hritik Manish Kothari	AI and Data Science Department
Representative from nearby Incubation Centre	Prof. K. T. Talele, SPIT, Mumbai	Incubation Unit SPIT
Representatives of SIDBI / NABARD / Lead Bank / Investor	Sr. Manager (ex. Officio), Corporation Bank, Hill Road Bandra-west	Bank Representative
Technical Experts from nearby Industry	Mr. Samir Kaji, M.D. Selec Controls P.Ltd	Industry Expert
Alumni Entrepreneurs	Mr. Ayush Jain, UthopiaTech	ECS Department
Students Yash Deshmukh, Kevin Mathew, Arpita Kar, Aayushi Thakur, Irfan Abidi, Gayatri Varma, Taransingh Rajpal, Warren Fernandes, Gini Chacko, Bibin Chacko, Sherwin Dsouza, Nealon Dcruz		All Departments

B. Brief mention of key functionaries at the IIC Institute

President	Main Point of Contact with MHRD Innovation Cell(MIC). To constitute the IIC council, Plan Quarterly Council Meeting To ensure the effective implementation of IIC activities.
Vice President	To ensure the effective implementation of IIC activities.
Convener	To work in coordination with IIC president and To provide help for smooth conduction of activities.
Innovation activity coordinator	To promote innovation related activities in the institute



Start-up activity coordinator	To boost startup generation and perform related activities.
Internship coordinator	To arrange student internships in startups.
IPR activity coordinator	To promote IPR awareness and conduct related activities.
Social Media Coordinator	To create and manage IIC page/account on Facebook, Twitter and YouTube and Instagram
ARIIA Coordinator	Coordinate for ARIIA related activities
NIRF coordinator	Coordinate for NIRF related activities.

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

Total No. of IIC Members	22
Total No. of Innovation Ambassadors	10(basic level) + 8(Advanced level) = 18
Total No. of faculty Mentors From Portal	11
Pre-Incubation Units, If any	Yes
Incubation Units, If any	No
IP Facilitation Unit, If any	Yes

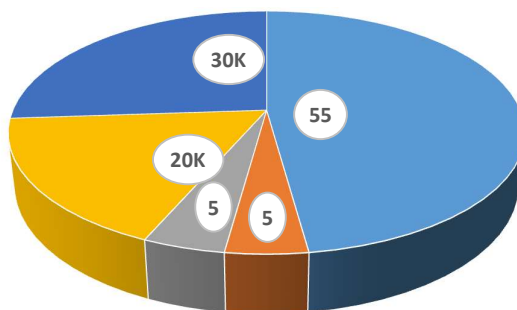
D. Highlight Facilities, Infrastructure of Pre-Incubation & Incubation kind and Student bodies/clubs engaged in promotion of Innovation and Entrepreneurship in the campus.

1. Under the chairmanship of Principal Dr. Srija Unnikrishnan pre-incubation unit facility is established.
2. Dedicated workspace is allocated in Laboratory.
3. Institute is providing financial assistance and attendance to Staff and faculties in its best possible way.
4. Professional Consulting Support is provided(Naman Angels)
5. Startup Cell, Entrepreneurship cell, IPR Cell are actively engaged in the promotion of Innovation and Entrepreneurship activities in the campus.
6. Dedicated IPR centre is available in the Campus. Project space and Internet facility is provided.
7. Pre-Incubation is work in the progress stage.

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

Sr.No.	Title	Number
1	Number and Different types of I&E and IPR activities Conducted	55
2	No. of student's & faculty ideas generated	5 shortlisted/ 22(Total)
3	No. of student's & faculty Innovation/prototypes developed	05
4	No. of IPs generated, published and granted	Nil
5	No. of Student & Faculty Start-ups/Ventures established.	Nil
6	Amount spent on promotion and awareness generation on Innovation Entrepreneurship in the campus	20,000
7	Amount grant or fund supported to student & Faculty lead Innovations, start-ups and IPR	30,000
8	No. of Technology Transfer and Commercialisation happened	Nil

Achievements




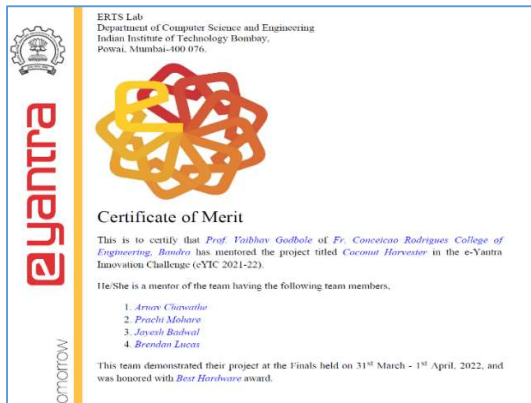
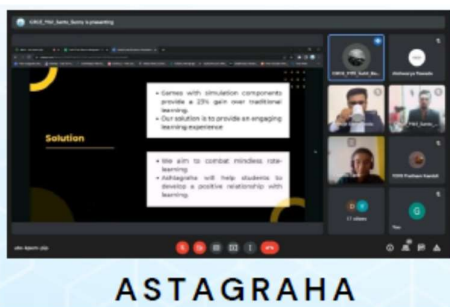

- Number of I&E and IPR activities conducted
- No. of student's & faculty ideas generated
- No. of student's & faculty Innovation/prototypes developed
- Amount spent on promotion and awareness generation on Innovation Entrepreneurship in the campus
- Amount grant or fund supported to student & Faculty lead Innovations, start-ups and IPR


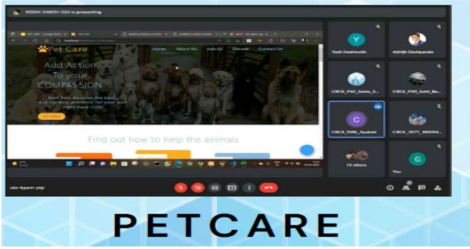
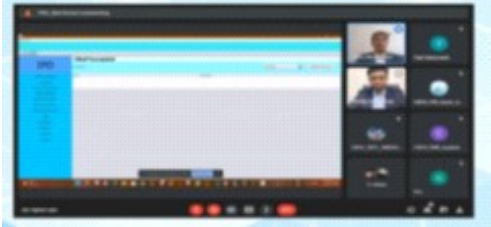
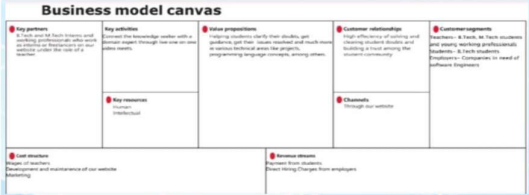
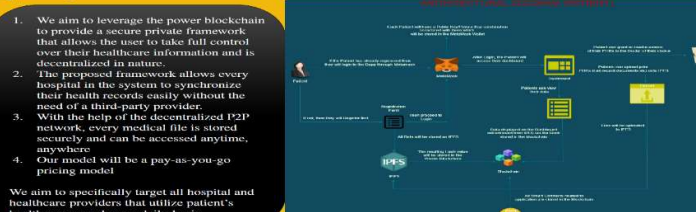
F. Highlight few best IIC Faculty/Student members and their achievements/ Rewarded for the innovations at different forum

Faculty Name-Designation	Profile
Dr. Jagruti Save (24 Years) Head AI DS Department	Received World Education Congress EDUTECH LEADERSHIP AWARD on 7 th July 2022
Prof. Swati Ringe (25 Years) NISP coordinator IIC Member	Won in AI hackathon an initiative of SINE-IITB supported by MSH, MEITY and organized by DERBI Foundation in the month of Aug 21
Prof. Vaibhav Godbole (23 Years) Assistant Professor IIC Member	Won The Best Hardware Solution Award E-yantra Innovation Challenge IIT Bombay (2021-2022)
	Participated in Regional Finals " Eyantra Startup Sprint " Eyantra Innovation Challenge IIT Bombay (2020-2021)
	Won The Best Hardware Solution Award E-yantra Innovation Challenge IIT Bombay (2019-2020)
Dr. Deepak.V. Bhoir (27 Years) Dean Students Affair Professor ECS Department	Finalists at " Quest Ingenium ". Participated in Regional Finals E-yantra Mumbai.
	Shortlisted Under " AICTE-Chhatra Vishwakarma Awards " for the year 2020.
	Participated in E-yantra Innovation Challenge, and semi- finalists.
Prof. Kranti Wagle (17 Years) Assistant Professor IIC President Innovation Ambassador	Won the " Most Innovative Solution Award " E-yantra Innovation Challenge IIT Bombay
	Semi-finalists 3 times E-yantra Innovation Challenge IIT Bombay
	Final Round of Avishkar Research Convention 2020-21, Mumbai University.
	Won the " Young Investigator Award. "
	Participated in DST and Texas Instruments India Innovation Challenge Design Contest powered by AICTE competition.

Prof. Kalpana Deorukhkar (20 Years) Assistant Professor Computer Department	Won the “ Most Innovative Solution Award ” E-yantra Innovation Challenge IIT Bombay
	Won the “ Best Algorithm Design Award ” E-yantra Innovation Challenge IIT Bombay.
	Participated in Regional Finals “ Eyantra Startup Sprint ” Eyantra Innovation Challenge IIT Bombay (2020-2021)
	Won The Best Hardware Solution Award E-yantra Innovation Challenge IIT Bombay (2021-2022)
Prof. Supriya Kamoji Assistant Professor	Final Round of Avishkar. Research Convention 2020-21 , Mumbai University for the Project Titled “Prediction of Parkison’s Disease”
Prof. Unic Lokande Assistant Professor	Mentor of SIH Team 2020 “ SURGE1 ” Problem statement by “ CISCO DEVNET ” Winner at SIH 2020

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

Sr. No.	Innovator Name with Innovation
1	<p>Coconut Harvester – Arnav Chawathe , Prof. Vaibhav Godbole Creating a robot which will be attached to the coconut tree and can handle the dangerous part of harvesting.</p> <div style="display: flex; justify-content: space-around;">   </div>
2.	<p>Asthagraha – Santo Sunny, Prof. Swati Ringe Educational Space Game - Create free games which help in learning concepts.</p> <div style="display: flex; justify-content: space-around;">   </div>
3.	<p>Health checkup system- Hitesh Sharma, Deon Berton Gracias, Aditya Kailash Vyas, Atharva Prashant Pawar, Prof. Swati Ringe</p> <p>To make a device for accurate detection of heart rate, blood pressure, temperature and stress level using jetson Nano kit and thermal camera concept that wavelength emitted by face can</p>

	be used to detect pulse of oneself. Jetson nano will be used for high frame per second purposes to get more accurate results and for temperature measurement, thermal camera with image processing technique will be used which will server as a non -contact device.	
4.	Organ Donation and Transplantation- Sahil Bodhke, Abeer Kazmi, Bhavika Salvi, Shriansh Jena, Prof. Kranti Wagle A web based application for registration for organ donation and transplantation that includes the donor registration card, educates people on the topic and spreads awareness, connects to hospitals and NGOs	
5.	PetCare - To build a website on rescuing stray/wounded animals using GPS with the help of NGOs 	6. D-Byte Pharmacare - PharmaCare is an application which can make the medical history/data of the patients accessible from anywhere at any time 
7.	Business model canvas  CLEAR IT	Clear It - A platform to connect the knowledge seeker with a domain expert through live one on one video meets where they can clarify their doubts, get guidance, get their issues resolved and much more in various technical areas like projects, programming language concepts, etc
8.	Pushing medical content on Blockchain for the secure medical database : Ishaan Loomba, Prof. Swati Ringe	

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

Selected Innovations : TRL level 3-4

1.	Asthagraha – Santo Sunny, Prof. Swati Ringe
2.	Health checkup system - Hitesh Sharma, Prof. Swati Ringe
3.	Organ Donation and Transplantation- Sahil Bodhke, Prof. Kranti Wagle
4.	Coconut Harvester – Arnav Chawathe , Prof. Vaibhav Godbole
5.	Mediblock: A One stop Destination for Interoperability between Patients and Doctors - Ishaan Loomba, Prof. Swati Ringe



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

Sr. No.	Title of the Project	Mentor Name	Abstract(Short Description)
1.	3D Mapping & Simulation of Terrain Using Embedded Systems and Unity Real Time Development	Allen Xavier Arasan Urvashi Dhingra Jacob Moulath Dr. Sapna Prabhu	In this project we are going to use a single robot which will help to reduce the dangers of cave explorers and archaeologists by creating a simulated map of the unknown terrain using 3d mapping in unity.
2.	Low Cost Portable Ventilator	Dr. D. V. Bhoir Om Nerurkar Rishika Korade Pranjal Mahajan Hrushikesh K.	Portable Ventilator by providing a battery backup unit. They are able to function in demanding environments with little maintenance. They provide long-term support for patients who do not require complex critical care ventilators
3	E-sports data analysis with the help of neural networks	Prof. Sushma N. Omkar Shisat Raj Lad Prathmesh G.	This project is our attempt to support Esports in India by providing it an analytical approach as analytics is a common practice on International scene but it is still missing in Indian Esports.
4	IoT based Smart Bag for Women's Safety using Machine Learning and AI	Prof. Kranti Wagle Mayank Tanna Rohin Vaidya Nimisha Bhoir	The idea is to create a solar powered IOT based smart bag. This bag will be useful for students to view daily schedules displayed on it. It should have security features which, by pushing an SOS button, the bag should send the live location and a live camera feed of the user to the user's guardians.
5	Contactless Attendance System	Prof. Garima Tripathi	Develop face recognition attendance system.

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

- **ARIIA** – Participation and Rank
- **IA** – Faculty Participation (18 Faculty)
- **NISP** Adoption status – Joined the campaign
 - Trained Faculty- Yes
 - Policy Formulation – Done and Approved.
 - Policy Implementation – Action Plan Prepared and On-going
- **YUKTI** - Number of Ideas submitted – 19
- **SIH, MANTHAN, BINANCE HACKATHON PARTICIPATION**
- **IIC REGIONAL MEET PARTICIPATION** – Presentation of I &E by NISP coordinator
- **ATL LINKAGES-**

ACCEPTED 64478345 -HANSRAJ MORARJI PUBLIC SCHOOL AND JUNIOR COLLEGE
AWAITING 65147458 -VIDYANIDHI V.P. HIGH SCHOOL

TINKERING LAB is a platform where creative and enthusiastic students from all the departments of the institute can try out their ideas with experimentation with the goal of making designs, prototypes, and products. During the entire process of tinkering in the lab, students will learn the process of problem-solving, designing, prototyping, product development, product testing, and marketing. Since students from different departments are joining the tinkering lab, it acts as a facility where the exchange of ideas from different domains takes place.

<http://fragnel.edu.in/index.php/thinking-lab>

SMART INDIA HACKATHON

Team Digital Pirates – Winner in Final -Software Edition- Theme :Transportation and Logistics
Ministry of Ports, Shipping and Waterways



Team – Infura – Participated in Finals at IIT GandhiNagar – Software edition
National Disaster Management Force (NDRF)



MANTHAN PARTICIPATION

Dr.Nilesh Patil- Mentor Team codeXcode

Sub: Manthan Hackathon 2021 – Nomination

I am pleased to nominate the below team from our college to participate in Manthan Hackathon 2021. AICTE Application No/ UGC Registration No for our college is 1-3508330114.

Team: codeXcode

	Name	Gender (M/F)	Email id	Mobile no.
Team Leader	Aaron Dsa	M	aaronsda05@gmail.com	9082523526
Team Member	Ganeshprasad Subramanya	M	keni.ganeshprasad@gmail.com	8149329269
Team Member	Heron Vas	M	heronvas897@gmail.com	9823204708
Team Member	Aldrich Mendes	M	aldrich.mendes@gmail.com	9819840083
Team Mentor	Nilesh Patil	M	nilesh.patil@fragnel.edu.in	7350791320

Prof. Prajakta Bhangale- Mentor Team Error404

08 October, 2021

Sub: Manthan Hackathon 2021 – Nomination

I am pleased to nominate the below team from our college to participate in Manthan Hackathon 2021. AICTE Application No/ UGC Registration No for our college is 1-3508330114.

Team: Error404

	Name	Gender (M/F)	Email id	Mobile no.
Team Leader	Robin Lobo	M	robinlobo2001@gmail.com	8766812179
Team Member	Sonali Joshi	F	sonalijoshi741963@gmail.com	9637841609
Team Member	Joel Syrus Fernandes	M	joelfernandes711@gmail.com	8693861320
Team Mentor	Prajakta Bhangale	F	prajakta.bhngale@fragnel.edu.in	9833720466

Prof. Kranti Wagle – Mentor Team -DefCoders

Sub: Manthan Hackathon 2021 – Nomination

I am pleased to nominate the below team from our college to participate in Manthan Hackathon 2021. AICTE Application No/ UGC Registration No for our college is **1-3508330114**.

Team: DefCoders

	Name	Gender (M/F)	Email id	Mobile no.
Team Leader	Sahaana Iyer	F	sahaanaiyer@gmail.com	9987752158
Team Member	Gaurav Shetty	M	gauravshetty8703@gmail.com	8369271080
Team Member	Dishant Vora	M	dishantv13@gmail.com	9619239497
Team Member	Amit Dubey	M	dubeyamir946@gmail.com	9819041614
Team Member	Sudheer Tripathi	M	tripathisudheer604@gmail.com	7039574781
Team Mentor	Kranti Wagle	F	kranti@fragnel.edu.in	9619610494

Prof. Swati Ringe Mentor Team – Commandline Warriors

Sub: Manthan Hackathon 2021 – Nomination

I am pleased to nominate the below team from our college to participate in Manthan Hackathon 2021. AICTE Application No/ UGC Registration No for our college is **1-3508330114**.

Team: Commandline Warriors

	Name	Gender (M/F)	Email id	Mobile no.
Team Leader	Upmanyu Jha	M	hackergod00001@gmail.com	7303969321
Team Member	Kaustubh Mishra	M	Kaustubhmishra2001@gmail.com	7796850929
Team Member	Mitesh Satish Jainan	M	miteshjainan@gmail.com	9987055040
Team Member	Nihal Kumar Jha	M	nihaljha32@gmail.com	7710954626
Team Mentor	Swati Ringe	F	swati@fragnel.edu.in	9869841549

Prof. Prajakta Dhamnaskar- Mentor Team The Opus Geeks

08 October, 2021

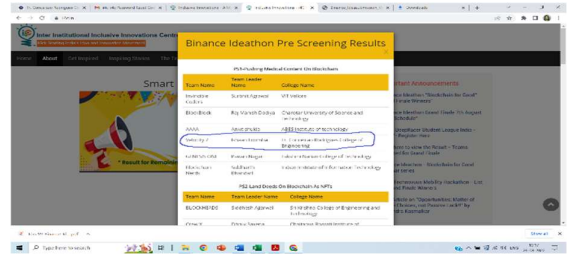
Sub: Manthan Hackathon 2021 – Nomination

I am pleased to nominate the below team from our college to participate in Manthan Hackathon 2021. AICTE Application No/ UGC Registration No for our college is **1-3508330114**.

Team: The Opus Geeks

	Name	Gender (M/F)	Email id	Mobile no.
Team Leader	Ritika Fargose	F	ritikafargose@gmail.com	86005 31344
Team Member	Lancelord Dmonte	M	lancelordmonte@gmail.com	9762776356
Team Member	Ferreira Orvell	M	ferreira.orvell@gmail.com	8554961562
Team Member	Clint Ferreira	M	clint.n.ferreira@gmail.com	8552947925
Team Member	Lance Main	M	lancemain7@gmail.com	9325239531
Team Mentor	Prajakta Dhamnaskar	F	prajakta.dhamnaskar@fragnel.edu.in	9867625188

BINANCE HACKATHON PARTICIPATION
Ishann Lambaa, Rachel Sequeira, Rissa Chettiar, Mann Sanghvi, Mentor-Swati Ringe



Team Explorers - Won in AI hackathon an initiative of **SINE-IITB** supported by MSH, MEITY and organized by DERBI Foundation in the month of Aug 21. Prof. Swati Ringe, Nicola Mascarenhas, Yash Khasgiwala, Mario Dias



Prof. Monali Shetty- SIH Team Mentor



Prof. Jagruti Save Received World Education Congress EDUTECH LEADERSHIP AWARD on 7th July 2022



PARTICIPATION AT IIC REGIONAL MEET AT SYMBIOSIS INTERNATIONAL UNIVERSITY 01-08-2022-



NISP Coordinator Prof. Swati Ringe invited as speaker in NISP track

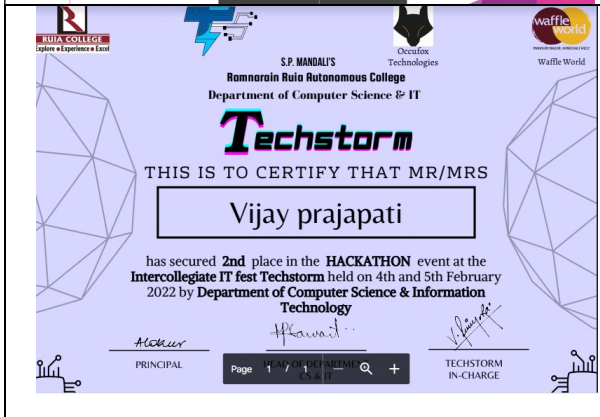
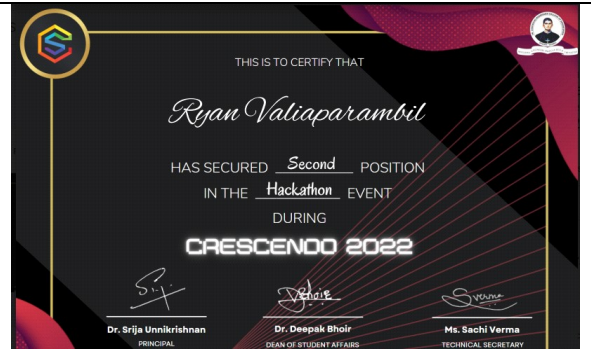


OTHER ACHIVEMENTS



Participation in Flipkart Robotics Challenge to solve the Real world Problem

Participation in NASA Global Hackathon on Earth



K. Detail of Social Media & Connections of IIC institute

IIC-CRCE Instagram Link: <https://www.instagram.com/agnelcrcebandra/>

IICCRCE Twitter: <https://twitter.com/agnelcrcebandra>

IIC Facebook Link: <https://www.facebook.com/iicfrcrce>

College website: <http://www.frcrce.ac.in/>

YouTube Channel :https://www.youtube.com/channel/UCOpSiHmOCy4_j5aP14XYThg

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



IIC helps shape the events in college to keep it centric towards innovation and Entrepreneurship. Working closely with IIC, I have managed to explore various domains and using that insight it helped me organize events specially for innovation and entrepreneurship. The workshops and seminars conducted also helped students gain knowledge about converting ideas to prototypes into startups and entrepreneurship. IIC also promotes various technical events which really help students hone their technical abilities and increase their skillset.

Sachi Verma

Technical Secretary (Students Council 2021-22)



I Joined as Innovation coordinator (Student) of IIC-FrCRCE during academic year 2021-2022. I was involved in numerous IIC activities conducted in each quarter. Its being a great opportunity to connect and cooperate with in-charges of other councils who conducted events in line with Innovation and startups. Many students got an opportunity to participate in Idea competition and taken necessary steps required to showcase their ideas and together bring those ideas into reality. I would like to thanks IIC 4.0 council members in believing in me. Special thanks to our teacher in charge Prof. Kranti Wagle, Prof. Swati Ringe, Prof. Ashwini Pansare and Prof. Swapnali Mahadik for being there throughout my IIC 4.0 Journey.

Ridham Bheda

Innovation Coordinator(Student)

IIC FRCRCE was established in November 2018 to create a vibrant local innovation ecosystem to develop an innovation mindset and facilitate a platform to transform their ideas into viable business propositions to start a business venture. I can say that IIC 4.0 was very successful in achieving that goal. It provided me and multiple students an opportunity to learn, develop and showcase our talents. Throughout the year, We participated in several webinars and seminars and have always learnt something new during those events. It taught me not only technical topics discussed during the event but also other skills such as Team Work, Leadership, Marketing, etc. IIC 4.0 gave the students, a boost, an urge, a motivation to innovate and set up their own startups.

*Pratham Kambli, Vice Captain,
Mozilla Campus Council CRCE, AI & DS Department*

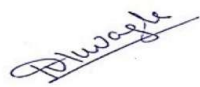


Video Testimonial by Higher Authority: Dr. Surendra Rathod – Head of the Institute

<https://youtu.be/l7rsYYwyDgk>

Dr. Deepak Bhoir – ARIIA coordinator

<https://youtu.be/lkzk0rjNtKo>



Prof. Kranti Wagle
President IIC –Fr.CRCE

REPORT – 2020-2021
INSTITUTE INNOVATION COUNCIL

Ministry of Human Resource Development (MHRD), Govt. of India has established 'MHRD's Innovation Cell (MIC)' at AICTE to systematically foster the culture of Innovation amongst all Higher Education Institutions (HEIs). MIC has envisioned encouraging creation of 'Institution's Innovation Council (IICs)' across selected HEIs. The primary mandate of IIC is to encourage, inspire and nurture young students by supporting them to work with new ideas and transform them into prototypes while they are in formative years.

IIC-FrCRCE was established in November 2018 with objectives to

- Create a vibrant local innovation ecosystem.
- Support Start-up Mechanism in HEIs.
- Prepare institute for Atal Ranking of Institutions on Innovation Achievements.
- Establish Function Ecosystem for Scouting Ideas and Pre-incubation of Ideas.
- Develop better Cognitive Ability for Technology Students.

IIC-FrCRCE is an interface between MIC and Fr. CRCE to showcase various activities conducted within the institute. MIC rated us with **4.5 Star certificate**.

The second version IIC3.0–FrCRCE initiated various innovation, start-up, entrepreneurship related activities such as Workshops, Boot Camps online, Seminars, Hackathons, **Idea Competition**, Mini Challenges, , success stories and interactions with professionals, Alumni Entrepreneurs ,in the college in association with various existing student councils in the academic year 2020-2021





NATIONAL LEVEL INNOVATION-POC-PROTOTYPE COMPETITION:-

IIC-FrCRCE in association with E-Cell organized institute level Idea competition on January 28TH 2021 in which 27 teams presented their ideas out of which two idea teams were declared as Winners .

Themes for the year :

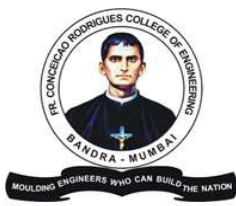
1. Healthcare & Biomedical devices
2. Agriculture & Rural Development
3. Smart Vehicles/ Electric Vehicle/Electric vehicle motor and battery technology
4. Food Processing
5. Robotics and Drones
6. Waste Management
7. Clean & Potable Water
8. Renewable and affordable Energy
9. IoT based technology (e.g. Security & Surveillance systems etc)
10. ICT, cyber physical systems, Blockchain, Cognitive computing, Cloud Computing, AI & ML
11. Other emerging areas of innovation and Startup opportunity

This year the event was conducted online wherein 27 teams participated and there were 3 panels as follows:

Panel 1: Mr. Mustafa Fatakawala, Data Scientist, Associate Consultant from Tata Consultancy Services(TCS), Prof Hitendra Vaishnav
Panel 2: Prof Dr. Vasim Shaikh, Prof Roshni Padte
Panel 3: Prof Dr. Ketaki Joshi, Prof Binsy Joseph

Following were the Winner Teams:

- 1. Idea: Low cost Portable Ventilator**
- 2. Idea: Teach Smart**



POC Competition

Co-ordinated 12 Project teams to participate POC competition. These Teams are going through the Training Sessions at Institute level through the IIC sessions organized on the following Topics:

1. Business Model Canvas
2. Prototype Designing and Validation
3. Critical Design Thinking
4. Innovation Process and IPR
5. Startup Training.

ACTIVITIES

The academic year divided into four quarters.

There are three types of activities conducted and their reports are uploaded along with photos, videos.

1. MIC Driven - Organized by MIC for faculty and students participation.
2. IIC Driven – Organized by IIC as per the guidelines of MIC.
3. Self Driven – Organized as self-initiative by IIC.

LIST OF ACTIVITIES – Reports submitted

Sr. No.	Title	Description	Activity Type	Quarter
1	How to Prepare for AWS Certification	To enlighten the audience on the following topics: - Demand of Cloud Based Services in IT industry - Introduction to AWS - Roadmap for AWS Solution Architect Certification	Self Driven	Quarter I 31-10-2020
2	My Story - Motivational Session by Gaurav Sen	Organized a My Story Session – Life of an Entrepreneur – Motivational session - To be delivered by a successful Start-up Founders/Entrepreneurs.	IIC	Quarter I 5-11-2020
3	Entrepreneurship and Innovation as a Career Opportunity Webinar	organized a session on the process and tools of Innovation Development from scratch. How to convert an idea to prototype? This should highlight the process of innovation development	IIC	Quarter I 9-11-2020
4	INDUSTRIAL DESIGN AND PROJECT MANAGEMENT	To learn about industrial design and PROJECT MANAGEMENT	Self Driven	Quarter I 3-10-2020
5	Exploring the Start-up dream: Plan to execution!	The Committee objective is to serve as a bridge between the existing students and the thousands of alumni world-over. The organized Panel Discussion was a way of connecting our existing students to the talents of our Alumni so that they may benefit from these experiences	Self Driven	Quarter I 20-11-2020
6	My Story - Motivational Session By Successful Innovators	Organised a Motivational Session on Innovator's Life, success story and future scope	IIC	Quarter I 28-11-2020
7	Modern Specializations for the Electronics Undergrads	Enlighten & motivate the students of the Electronics Engineering discipline to explore technological avenues of the future	Self Driven	Quarter I 6-11-2020
8	How to Start with Data Science	To help our attendees to learn how to start learning Data Science	Self Driven	Quarter I 26-9-

				2020
9	1st meeting	IIC Council formation or up gradation (of existing council) at Institute level	IIC	Quarter I 26-10-2020
10	Orientation Session on National Education Policy (with a focus on Innovation and entrepreneurship)	Organised One/Half Day Orientation Session for students and faculties on the National Education Policy (NEP).	IIC	Quarter I 2-01-2021
11	Webinar on Design Thinking, Critical Thinking and Innovation Design	The Workshop/Session may include following. Design Thinking Skills The psychological principles of problem solving and creativity The relationship between creativity, problem solving, and product performance	IIC	Quarter II 29-11-2020
12	Web-Development for Enterprise	a) Description of the problem: Explain the issues/topics to the students which need to be addressed. b) Review of existing research: Give a brief review of existing research related to the issues to students. c) Description of the innovation: Give a brief overview on innovation and related field of research.	IIC	Quarter II 28-11-2020
13	Design Validation	Following points should be covered under this: Make students aware about various design validation model. Identification & preparation, Planning, Development, Execution, and Process of validation of and Idea/PoC / Prototype (Hardware of Service) or startup. Analytical, creative, strategic & pragmatic approach of validation.	IIC	Quarter II 5-12-2020
14	Entrepreneurship development phases	Organised a workshop / Seminar / Call for Paper presentation on Innovation/Social Innovation & Entrepreneurship to promote research and knowledge creation in this area.	IIC	Quarter II 5-12-2020
15	Unscript Hackathon	The primary goal of this event was to raise	Self	Quarter II

	2k20	awareness of technical talent and foster a competitive, yet cooperative, and congenial culture for talented individuals.	Driven	21-11-2020 22-11-2020
16	Unscript Rookie's Hackathon 2k20-Android App Development	To give the Second Year students an exposure to hackathons	Self Driven	Quarter II 21-11-2020 22-11-2020
17	TEDx Talks 2020	Bring together the brightest minds of today; to foster ideas, growth; to provoke conversations.	Self Driven	Quarter II 7-11-2020
18	Life After Engineering	To highlight the importance of work life balance and development in the corporate sector	Self Driven	Quarter II 9-10-2020
19	Identifying intellectual components at the early stages of innovation	IP component is used to protect a new technology, product or service. Following points should be covered under this: Copyrights Design rights Trademarks Trade secrets	IIC	Quarter II 27-12-2020
20	Alcoholic 1.0	To help students to solve real world coding problems.	Self Driven	Quarter II 11-10-2020
21	Object Oriented Programming in Coding Interviews	To help students to prepare for coding interviews	Self Driven	Quarter II 25-10-2020
22	Session on Process of Innovation Development	Organised a session on the process and tools of Innovation Development from scratch. How to convert an idea to prototype? This should highlight the process of innovation development	IIC	Quarter II 28-12-2020
23	2nd meeting	Conduct 2nd IIC Council Meeting to check the progress and milestones set during the 1st council meeting, Pivot the action plan if	IIC	Quarter II 22-12-

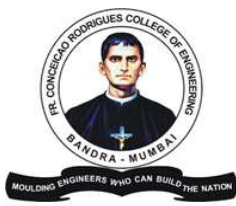
		required. Prepare roadmap for 2nd Semester (Quarter wise). Upload the revised Action Plan with Minutes of Meeting of the Council meeting in IIC Portal.		2020
24	Orientation Session on National Innovation and Startup Policy (NISP)	Organise One/Half Day Orientation Session on National Innovation and Start-up Policy (NISP) for students and faculty. The session should mainly focus on: Covering major highlights of National Innovation and Start-up Policy important for faculty and students. The Innovation and entrepreneurship part of NISP.	IIC	Quarter II 6-1-2021
25	Idea/ PoC pitching & validation and Institute level PoC competition. Submission of Idea/PoC on IIC Portal	Validate the Idea that the product or business idea has potential. The most critical assumptions regarding the idea are valid or not. Organize Institute level Idea/POC competition Invite ideas / POCs from students. Submit Ideas/POCs on National Innovation Contest page of MIC as per guidelines of contest.	MIC	Quarter II 28-1-2021
26	Toycathon	Toycathon is a novel opportunity for students from HEIs and schools to propose toys and games that will greatly help India develop into a global hub for toys and games and assist our children to understand the ethos and values of Indian culture as envisaged in the National Education Policy 2020. In Toycathon, students of undergraduate, postgraduate and doctoral courses are also allowed to enter in teams of at least 3 and at most 6 with up to 2 mentors to guide them. They will participate under track 2 of Toycathon 2021. The winners of Toycathon will have a chance to win total prize money worth of Rs. 50 lakhs. Last date for submission of ideas in prescribed format is 20th Jan 2021.	MIC	Quarter III 8-1-2021
27	Android Coding	Objective is to introduce the audience to Android programming and talk about its features and scope in the market	Self Driven	Quarter III 12-2-

				2021
28	Webinar on Technical paper writing	Webinar to introduce the audience to technical paper and teach them the basics of technical paper writing skills	Self Driven	Quarter III 23-2-2021
29	Mentoring Session for Future Innovators Student Entrepreneurs of CRCE	The Trained Innovation Ambassadors (Faculties) of MIC's should conduct mentoring sessions for innovative and entrepreneurial students. In absence of Innovation Ambassadors, an expert can be invited for the same purpose.	IIC	Quarter III 4-3-2021
30	INTERNSHIP EXPO 2021 at Startup	Giving opportunity to students to get internship under good startup companies and learn from them	Self Driven	Quarter III 6-3-2021
31	BOOTCAMP DIGITAL MARKETING for final year students of Fr CRCE	Organised one day or half day Boot Camp (or) Mentor Session on "Lean Start-up & Minimum Viable Product/Business". Conduct a boot camp or mentoring session for students.	IIC	Quarter III 12-3-2021
32	Motivational speech on perseverance and determination: ladder to success and Women's day celebration	To show the importance of perseverance and determination for success and celebrate women's day	Self Driven	Quarter III 12-3-2021
33	Cresendo-Project Competition a Step Towards Innovation	Competition where students display their best projects	Self Driven	Quarter III 21-3-2021
34	Crescendo Mechathon-A Step Towards Innovative solutions for Sustainable Energy	Competition where students have to make a complete hardware product within 24 hrs	Self Driven	Quarter III 20-3-2021 21-3-2021

35	Crescendo Hackathon -Code Innovation Series for Young Technology Enthusiasts	Competition where students have to make a complete software product within 24 hrs	Self Driven	Quarter III 20-3- 2021 21-3- 2021
36	Business Model Canvas	Organised a half or one day workshop on Business Model Canvas (BMC) and conduct a Business Plan Competition to Invite Innovative Business Models from Students and reward the best business models.	IIC	Quarter IV 22-3- 2021
37	Roadmap to become a cyber security specialist	Give students a brief idea of cyber threats and securities and introduce them to cyber security specialist job	Self Driven	Quarter IV 27-3- 2021
38	My Story-Landing A Dream Job and Living a Startup Dream	To motivate students on startups.	Self Driven	Quarter IV 7-4-2021
39	Journey- Innovative Project to Product	The framework for building an innovation fit for market includes: • Determining target customer. • Identifying customer needs. • Defining value proposition. • Specifying minimum viable product feature set • Creating minimum viable product prototype. • Testing minimum viable product with customers.	IIC	Quarter IV 26-3- 2021
40	BUSINESS MODELLING AND PLAN DEVELOPMENT	Teach the audience how to develop any plan as a start up product and how to model your business	IIC	Quarter IV 6-04- 2021
41	Workshop on Prototype/Process Design and Development - Prototyping	Organised a half or one day workshop on Prototype or process design development. The faculty members should help students as a mentor with their ideas/POCs in developing the prototypes.	IIC	Quarter III 10-4- 2021

42	Field/Exposure Visit to Incubation Unit/Patent Facilitation Centre/Technology Transfer Centre/ Co-working spaces		IIC	Quarter III Upcoming
43	Session on “How to plan for Start-up and legal & Ethical Steps”		IIC	Quarter III Upcoming
44	Interactive Session/Mentoring Session with "Successful Start-up founders" (Entrepreneurs in Campus)		IIC	Quarter III Upcoming
45	Workshop on Intellectual Property Rights (IPRs) and IP management for start up		IIC	Quarter III Upcoming
46	Orientation session for all students & faculties of Institute by Innovation		IIC	Quarter III Upcoming

	Ambassador(s).			
47	Session on Prototype Validation - Converting Prototype into a Startup		IIC	Quarter IV Upcoming
48	Session on Accelerators/Incubation - Opportunities for Students & Faculties - Early Stage Entrepreneurs Organise Session on "Lean Start-up & Minimum Viable Product/Business"- Boot Camp (or) Mentoring Session		IIC	Quarter IV Upcoming
49	Session on Angel Investment/VC Funding Opportunity for Early Stage Entrepreneurs		IIC	Quarter IV Upcoming



50	Session/ Panel discussion with innovation and Startup Ecosystem Enablers from the region/state/national level		IIC	Quarter IV Upcoming
51	Orientation session for all students & faculties of Institute by Innovation Ambassador		IIC	Quarter IV Upcoming

PHOTOS

MoE's INNOVATION CELL (GOVERNMENT OF INDIA) Ministry of Education Government of India INSTITUTION'S INNOVATION COUNCIL AICTE

Become an IKS Explorer to Contributor Listen to Experts

Orientation Session ON

Methods of Exploring and Capturing Values from Indian Agriculture and Health Sector

Prof. Anil Sahasrabudhe Chairman, AICTE Shri A.B. Coo, NS

Activity Category: MIC Driven Activity Submit Your Research & Knowledge Practices In Agriculture and Health Sectors at IKS Portal from 3rd - 10th Nov 2020 <https://iks.aicte-india.org>

Date: 3rd November 2020 Time: 11.00 AM to 12.00 PM <https://mhrdinnovationcell> Indian Knowledge Systems (IKS)

All India Council for Technical Institutions (AICTE), New Delhi

All Students, Faculty and Staff are Invited to Join the Session

acm INSTITUTION'S INNOVATION COUNCIL IIC-FrCRCE

MY STORY

A MOTIVATIONAL SESSION BY MR. GAURAV SEN!

About our speaker:

Mr. Gaurav Sen

- Founder, Interview Ready
- Ex. SDE, Uber
- Ex. Platform Engineer, Directi
- Ex. IT Analyst, Morgan Stanley

DATE - NOV 05 TIME - 11:00 AM VENUE - GOOGLE MEET

SCAN QR CODE FOR REGISTRATION

IEEE & WIE COUNCIL OF FR.CRCE PRESENTS, OUR SPEAKER'S 2020

WEBINAR

ENTREPRENEURSHIP & INNOVATION AS CAREER OPPORTUNITY

Mr. Ayush Jain
Co-founder of Utopia-Tech
Ex-Embedded Systems Engineer at Godrej Security Solutions

Mr. Farhan Shaikh
Senior Consultant Capgemini
Invent, Ex-Director (Digital) GroupM, Mindshare, Ex-SAP Analyst Bayer Business Services.

NOVEMBER 9th
TIME: 4:00

INSTITUTION'S INNOVATION COUNCIL IIC-FrCRCE

WEB-DEVELOPMENT for ENTERPRISE

SPEAKER OF THE EVENT:

Rajeev Karuvath

- All-time award winner at BNPP ISPL
- Software Engineer-well versed with Django, MS SQL, Dev Ops, Actimize and set his ground by creating an e-commerce platform.
- Specialist in Cryptography and Authentication Security.
- An alumni of Fr.CRCE.

DATE : November 28
TIME : 4.00 PM



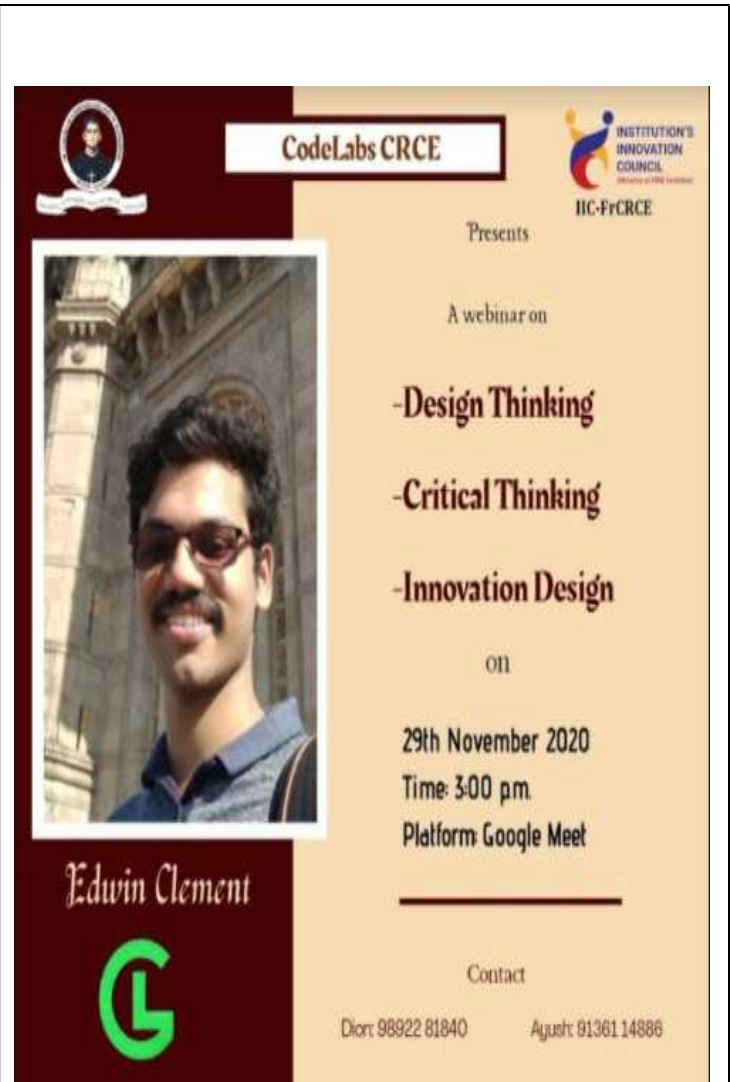
My Story
Motivational Session by Successful Innovators

Certificates: Provided
Participation: Free

Where : Google Meet
Date : 28 November, 2020
Timings : 1:00pm- 2:00pm

Contact:
Nisha - +91 8369302010
Raj - +91 9673179079

Ms. Vandana Thakur



CodeLabs CRCE
Presents

A webinar on

- Design Thinking
- Critical Thinking
- Innovation Design

on

29th November 2020
Time: 3:00 pm
Platform Google Meet

Edwin Clement

Contact
Dior: 98922 81840 Ayush: 91361 14886



Fr. Conceicao Rodrigues College of Engineering

MOZILLA CAMPUS CLUB CRCE PRESENTS

Webinar :

DESIGN VALIDATION

SPECIFICALLY USING DOUBLE DIAMOND APPROACH

Date : 5th December, 2020
Time : 2:00 to 3:00 pm
Platform : Google Meet

Mr. Ismail Akbani
Faculty at Symbiosis Institute of Technology
Design Thinking Master Practitioner
Innovation Researcher

For further Queries Contact:
Sahaana : +91 9987752158
Vedaant : +91 9511246039



IIIExCRCE in collaboration with IIC invites you a workshop on

'ENTREPRENEURSHIP DEVELOPMENT PHASES'
- Surendar

- 3rd Year Mechanical Engineering Student
- Founder & CMO at 'Techiegen'

Techiegen is India's #1 Student Community for Upskilling & Networking

Venue: MS Tea
Date: 5th Dec
Time: 5:00 pm

Contact:
Manan Nandwana: 9979887891
Shubham Nar: 8104397900



Webinar Session on
Identifying Intellectual component at the early stage of Innovation
Speaker: Prof. Hitendra Vaishnav
Date: 27th December, 2020
Platform: Google Meet
Duration: 1 hour
Time: 17:00 IST
Contact: Harshal Khedekar - 9967967820
Soham Sawant - 9004906782



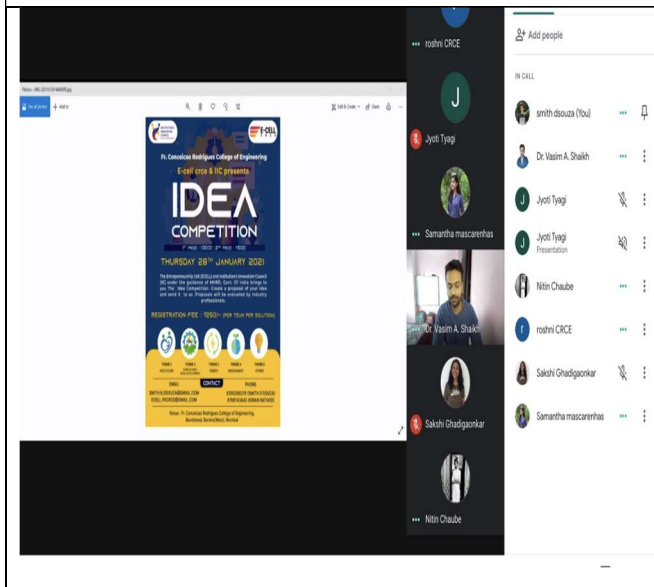
SESSION ON PROCESS OF INNOVATION DEVELOPMENT
28th December, 4.00pm to 6.00 pm
SPEAKERS :
➤ MR. HARISH AIYER
➤ MS. APARNA RAMCHANDRA
➤ MR. KIRAN TALEL
➤ MR. RAJESH SHETTY
CURATOR OF SESSION: PROF. DINESH ISRAEL
CONTACT: SMITH D'SOUZA - 8390266219
PRAJAKTA BHANGALE - 98333721



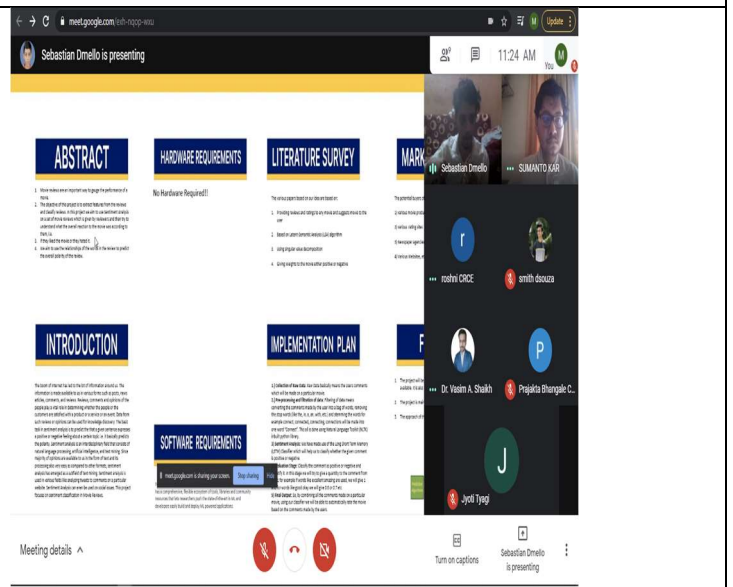
IEEE & WIE PRESENTS Webinar On TECHNICAL PAPER WRITING
With our very own & honourable speaker
23rd Feb'21
TIME: 5 pm
Mode of conduct: Zoom
Dr. Sapna Prabhu
Head of department (Electronics and Computer Science)
Register yourself now to make the best out of this opportunity



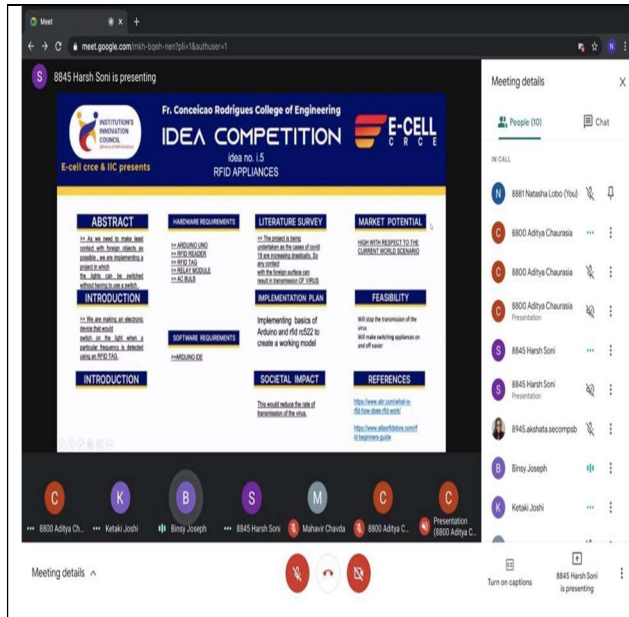
Mentoring Session for future Innovators Student Entrepreneurs of CRCE
MAYANK TANNA
Team Leader, Technical Division
Nimisha Vidyadhar Bhoir
Member, Business and Finance Management Division
Rohin Maish Vaidya
Vice Lead, Technical Division
Nidhi Sanjay Sharma
Member, Business and Finance Management Division
Currently Competing for National R&D Development Corporation
Semifinalist for National Innovation competition
National Innovation Competition
MRDC National Meritorious Invention Award -20
National Societal Innovation Award -20
National Innovation Award -2020
Register Now! Meeting Link
Compulsory for Shortlisted students of Idea Competition

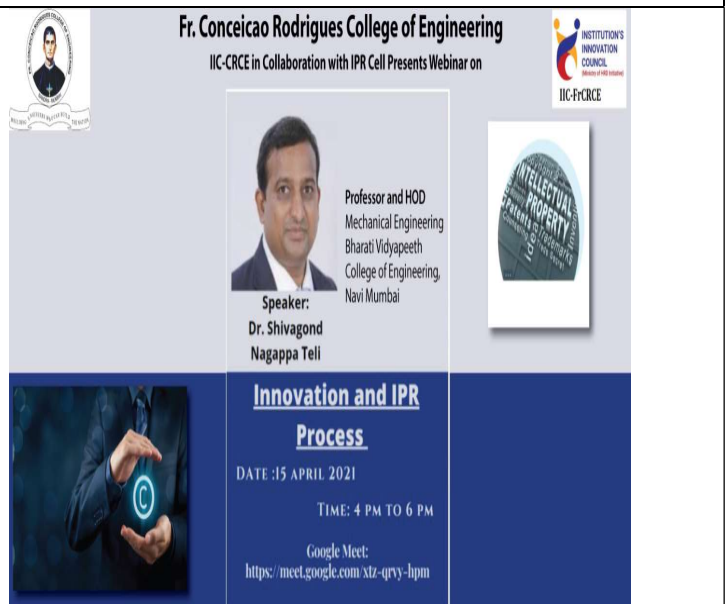


Zoom meeting interface showing a presentation slide for IDEA COMPETITION. The slide details the competition's focus on innovation and technical writing, with a deadline of Thursday, 28th January 2021. The meeting participants list includes: roshni CRCE, Jyoti Tyagi, Samantra maccarenhas, Dr. Vaish A. Shaikh, Jyoti Tyagi Presentation, Nitin Chaube, roshni CRCE, Sakshi Ghadgaonkar, and Samantra maccarenhas.



Zoom meeting interface showing a presentation slide with sections: ABSTRACT, INTRODUCTION, IMPLEMENTATION PLAN, and SOFTWARE REQUIREMENTS. The slide content includes instructions for participants to prepare an abstract, introduction, and implementation plan. Meeting participants list includes: Sebastian Dmello, SIMANTO KSR, roshni CRCE, smith souza, Dr. Vaish A. Shaikh, Prajakta Bhangale C., and Jyoti Tyagi.





WORKSHOP ON PROTOTYPE/PROCESS DESIGN AND DEVELOPMENT

ABOUT OUR SPEAKER

- IIC-Innovation Ambassador
- DBT_BIRAC Research Fellow
- CS NRF National Research BARTI
- PHD Tech Pharmaceuticals ICT

Venue: Google meet
Time: Saturday, April 10th at 10am

Mr. Amit Lokhande

IEEE & WIE
Presents
webinar on "SUCCESSFUL START-UP FOUNDERS"

Our speaker

MR. NIRMAL TOPIWALA
(CBO / Growth enabler/Remote Technology Teams)
Chief Business officer of AJACKRUS
Co-founder and CBO of VISAGUIDE
Amazing marketing strategies, Business development strategies

10th April 2021
12:30 pm
Google meet

Fr. Conceicao Rodrigues College of Engineering
MOZILLA CAMPUS CLUB CRCE PRESENTS

Webinar :
Prototype Validation
Converting Prototype into Startup

Date : 10th April, 2021
Time : 4:00 pm to 5:00 pm
Platform : Google Meet

Speaker : Mr. Rudragouda Patil
Assistant Professor | Entrepreneur Educator at MIT Academy of Engineering, Alandi

For further Queries Contact:
Sahaana : +91 9987752158
Vedaant : +91 9511246039

IoT based project design with Node MCU
(Step towards Innovation)

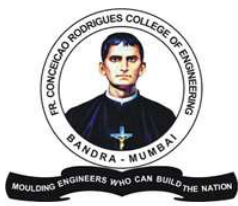
Date: 12th April 2021

Platform: Gmeet
Time: 4PM

Allen Xavier
BE Elex

Shree Lole
BE Elex

Reg link : <https://bit.ly/3dXnW3g> Google-Meet link : <https://meet.google.com/rdw-mejr-fnx?hs=122&authuser=1>



ICAO RODRIGUES COLLEGE OF ENGINEERING
Fr. Agnel Ashram, Bandstand, Bandra (W), Mumbai - 400 050



REPORT - 2019-2020
INSTITUTE INNOVATION COUNCIL

Ministry of Human Resource Development (MHRD), Govt. of India has established 'MHRD's Innovation Cell (MIC)' at AICTE to systematically foster the culture of Innovation amongst all Higher Education Institutions (HEIs). MIC has envisioned encouraging creation of 'Institution's Innovation Council (IICs)' across selected HEIs. The primary mandate of IIC is to encourage, inspire and nurture young students by supporting them to work with new ideas and transform them into prototypes while they are in formative years.

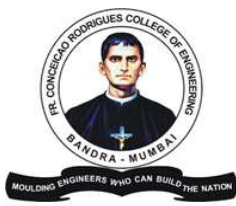
IIC-FrCRCE was established in November 2018 with objectives to

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- Support Start-up Mechanism in HEIs.
- Prepare institute for Atal Ranking of Institutions on Innovation Achievements.
- Establish Function Ecosystem for Scouting Ideas and Pre-incubation of Ideas.
- Develop better Cognitive Ability for Technology Students.

IIC-FrCRCE is an interface between MIC and Fr. CRCE to showcase various activities conducted within the institute. MIC rated us with **4.5 Star certificate** in the academic year 2019-20.

The second version IIC2.0–FrCRCE initiated various innovation, start-up, entrepreneurship related activities such as Workshops, Industrial Visits, Seminars, Hackathons, **Idea Competition**, Mini Challenges, **Innovation day celebrations**, success stories and interactions with professionals, Science day celebrations in the college in association with various existing student councils in the academic year 2019-20.





NATIONAL LEVEL INNOVATION-POC-PROTOTYPE COMPETITION:-

IIC-FrCRCE in association with E-Cell organized institute level Idea competition on 30th January 2020 in which 17 teams presented their ideas out of which three idea teams represented our college and participated at national level competition and undergone with mentoring and evaluation. Their results are awaited.

1. Idea: IOT based solar powered smart bag for women's safety along with air purification system
2. Idea: CHEENIKUM- Zindagi Zyada
3. Idea: Indoor Navigation System

17 ONLINE SESSIONS CONDUCTED BY MIC (DURING LOCKDOWN- MAY 2020):-

Faculty and students were informed and provided all this information regularly to participate the sessions. The faculty successfully completed all 17 sessions along with assessment and awarded as Innovation Ambassador.

1. Prof. Hitendra Vaishnav
2. Prof. Swati Ringe
3. Prof. Roshni Padte
4. Prof. Dipali Bhise

PAPER PRESENTATION:-

IIC-FrCRCE motivated and sent 4 teams (11 students) to Goa for paper presentations on the theme of startups.

Innovation Challenge Design Contest (IICDC):-

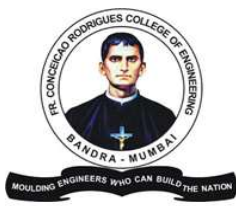
Co-ordinated 24 Project teams to participate in IIC-DC project competition.

ACTIVITIES

The academic year is divided into four quarters.

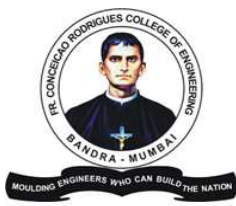
There are three types of activities conducted and their reports are uploaded along with photos, videos.

1. MIC Driven - Organized by MIC for faculty and students participation.
2. IIC Driven – Organized by IIC as per the guidelines of MIC.
3. Self Driven – Organized as self-initiative by IIC.



LIST OF ACTIVITIES – Reports submitted

Sr. No.	Title	Description	Activity Type	Quarter
1	IIC-National Innovation contest – Prototype Submission	Prototype/Innovation: Student teams can submit their Prototypes directly through this page or through IIC Council President/Convener. 6th June to 30 June 2020.	MIC	Quarter IV 6th-30th June 2020
2	Online Session 17	Interaction with Student Innovators and Entrepreneurs Emerged from Smart India Hackathon (SIH)	MIC	Quarter IV 22-05-2020
3	Online session 16	Frugal Engineering and Social Entrepreneurship	MIC	Quarter IV 21-05-2020
4	Online Session 15	Increasing Chances of Survival of Innovation and Venture - Actually applying data and market research for survival -B2B and B2C case studies	MIC	Quarter IV 20-05-2020
5	Online Session 14	Organise Workshop on Business Model Canvas (BMC) and (or) Business Plan Competition to Invite Innovative Business Models from Students	MIC	Quarter IV 19-05-2020
6	Online Session 13	13Innovation Risk Diagnostic: Product Innovation Rubric (PIR)	MIC	Quarter IV 15-05-2020
7	Online Session 12	Understanding Role and Application of Marketing Research at Idea to Start-Up Stage -	MIC	Quarter IV 14-05-2020
8	Online Session 11	Innovating Self- Screen and Identify right opportunities by Prof. Sanjay Inamdar Entrepreneur and Founder of Flucon, Alumni-MIT, Harvard, and Carnegie Mellon	MIC	Quarter IV 13-05-2020
9	Online Session 10	Organise One day Session on “How to plan for Start-up and legal and Ethical Steps”	MIC	Quarter IV 12-05-2020
10	Online Session 9	Understanding Angel and Venture Capital Funding	MIC	Quarter IV 08-05-2020
11	Online Session 8	Intellectual Property (IP) Management at Early Stage of Innovation and Start-ups	MIC	Quarter IV 07-05-2020
12	Online Session 7	How to Identify Right Problem and Solution using the Double Diamond Approach in Design	MIC	Quarter IV 06-05-2020
13	Online Session 6	Entrepreneurship, Business Idea and Business Model Canvas	MIC	Quarter IV 05-05-2020
14	Online Session 5	Hangout with Successful Startup Founder and Learn on Design thinking Approach for Hardware Innovation	MIC	Quarter IV 04-05-2020
15	Online Session 4	Role of Network Enablers in driving I&E in HEIs - A Case of TiE, India	MIC	Quarter IV 01-05-2020
16	Online Session 3	“Hangout with Successful Start-ups” by Innovator cum Entrepreneur 1.Ms. Vandana Thakur 2.Mr. Amit Sanjay Lokhande	MIC	Quarter IV 30-04-2020
17	Online Session2	Session on Accelerator/Incubation - Opportunity for Student Faculty - Early Stage Entrepreneurs	MIC	Quarter IV 29-04-2020
18	Online Session1	National Innovation and Startup Policy for Students and Faculty 2019	MIC	Quarter IV 28-04-2020
19	Leadership Talk	Dr. Abhay Jere interaction with Dr. Pramod Chaudhari, Founder & Chairman, PrajIndustries	MIC	Quarter IV 16-05-2020
20	Leadership Talk	Prof. DP Singh, Chairman on 9th May at 11.00 am	MIC	Quarter IV 09-05-2020
21	Leadership Talk	Dr. Madhuri Kanitkar, Lieutenant General who is the only 3rd women to become 3 Star-General in India Arm Forces.	MIC	Quarter IV 02-05-2020
22	Leadership Talk	Dr.BVR Mohan Reddy, Chairman Cyient & Ex-Chairman NASSCOM. Dr. Reddy talks about silver lining for industry in #Covid crisis.	MIC	Quarter IV 27-04-2020
23	Leadership Talk	Mr. Gautam Bambawale, Ex-India's Ambassador to	MIC	Quarter IV

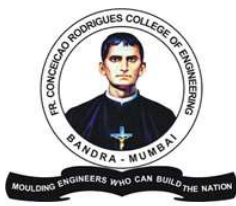


FR. CONCEICAO RODRIGUES COLLEGE OF ENGINEERING
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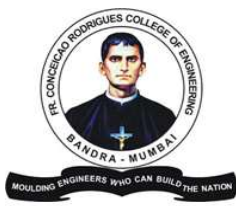


IIC-FrCRCE

		China on how this Covid crisis offers unique opportunity for India vis-à-vis China.		23-04-2020
24	Leadership Talk	leadership talk is with Padma Shri, Vaidya Rajesh Kotecha, Secretary Ministry of Ayush, Govt of India	MIC	Quarter IV 22-04-2020
25	Leadership Talk	Dr.Gurung Desh Deshpande,Indian-American	MIC	Quarter IV 22-04-2020
26	Leadership Talk	Mr. Yashraj Bhardwaj, Co-Founder, Zenith Vipers & Partner Ensure Equity	MIC	Quarter IV 20-04-2020
27	Leadership Talk	Prof. K.K Aggarwal, National Board of Accreditation(NBA), Govt. of India	MIC	Quarter IV 18-04-2020
28	Leadership talk	Mr. Ronnie Screwvala	MIC	17-04-2020
29	Leadership talk	Dr. Vinay Sahasrabhdhe, President, ICC	MIC	16-04-2020
30	Covid-19 Awareness Quiz This	Create awareness about Covid-19 among students and faculty.	Self Driven	Quarter IV (6-17 th) May 2020
31	Leadership talk	Ms. Shradha Sharma, Founder, and Chief Editor, YourStory.com	MIC	Quarter III/IV 15-04-2020
32	Leadership talk	Dr. Anand Deshpande, Founder, Chairman & Managing Director, Persistent Systems Ltd	MIC	Quarter III/IV 14-04-2020
33	Leadership talk	Dr. VK Saraswat, Member NITI Aayog.	MIC	Quarter III/IV 13-04-2020
34	Leadership talk	Mr.Abhishek Singh,CEO, My Gov	MIC	Quarter III/IV 11-04-2020
35	Leadership talk	Prof. Partha Chakraborty, Chairman National Digital Library,Ex-Director, IIT Kharagpur	MIC	Quarter III/IV 10-04-2020
36	Leadership talk	Prof. Anil D.Sahasrbudhe, Chairman, AICTE	MIC	Quarter III/IV 09-04-2020
37	Leadership talk	Leadership talk with Prof. K Vijay Raghavan, Principal Scientific Adviser, Government of India	MIC	Quarter III/IV 08-04-2020
38	Leadership talk	Leadership Talk with Mr. Abhishek Suryawanshi, Director, Wikipedia, Swastha	MIC	Quarter III/IV 07-04-2020
39	Failure analysis of automotive parts	The session mainly is conducted to cover various techniques and tests conducted in the industry for identifying the sources of failure and carrying out failure analysis of automotive parts with industrial case studies.	Self driven	Quarter III 12-04-2020
40	Presentation Women in Entrepreneurship	The event is organized as a part of women's day celebration. The speaker is Mrs. Prema Mishra, founder of catapult shared her experiences. The event is organized to motivate and inspire students to think innovatively and grow as an entrepreneur	Self driven	Quarter III 12-04-2020
41	Bootcamp	DICE BOOTCAMP		Quarter III 11-03-2020
42	Internship Expo 2020	Internship Expo 2020		Quarter III 29-02-2020
43	Field Visit to Matunga Railway workshop	The aim of the Industrial Visit is to demonstrate the students, the working of large scale production machines and the functioning of the repair processes in Railways.	Self driven	Quarter III 28-30 January 2020
44	IPR and IP management	Organise One Day Awareness/Mentoring Session on IPR & IP Management for Innovation and Start-ups	MIC	Quarter III 23-01-2020
	Idea-Business Model	How to convert your Project idea into business Model		Quarter III 23-01-2020



45	Idea Competition	Invited innovative socially relevant ideas for development of the product. The shortlisted ideas will be guided by experts for further improvements.	Self driven	Quarter III 22-01-2020
46	Innovation day celebration - second half	Innovation day celebration - second half at Fr.CRCE by conducting innovative activity by different councils in the institute and participated by the students. The activities conducted are Logo Guessing, Logo Competition, Scene Kya Hai, Maze Kings, Code Breakers, Image Capture, Green Photography, Nature's Slogan, Essay Competition , Best Design, Innovatsy	Self driven Activity	Quarter III 22-01-2020
47	IIC National Innovation Contest-PoC Submission	IIC National Innovation Contest-POC Submission. Please refer: https://mic.gov.in/innovationcontest/	MIC	Quarter III/IV
48	IIC National Innovation Contest-Idea Submission	IIC National Innovation Contest - idea Submission. Please refer: https://mic.gov.in/innovationcontest/	MIC	Quarter III/IV
49	Idea Submission in Smart India Hackathon 2020	The top 7 teams (5 teams for Software edition and 2 teams for Hardware edition) nominations (from internal hackathon) submitted on the SIH portal by the College SPOC only.	MIC	Quarter III 18-01-2020
50	Progress Monitoring and Upload of 3rd Quarter Action Plan	Organise the council meeting and Upload the 3rd Quarter action plan along with meeting of minutes .	IIC	Quarter III 14-01-2020
51	Demo Day – Exhibition Cum Demo	Exhibition Cum Demo & Mentorship Session for Innovators (or) Student Entrepreneurs	IIC	Quarter II 04-01-2020
52	Industrial Visit	The industrial visit of Fr. Conceicao Rodrigues College of Engineering, Mumbai took place with a centralized conglomerate of staff & students to Chandigarh, Shimla & Manali from the 27th December 2019 to 4 th January 2020 with proposed industrial visit sites scheduled at Rajiv Gandhi Information Technology (IT) Park at Chandigarh, Micro Turners Group at Baddi, (H.P.) & Jay Bee Transformers at Panchkula (Haryana). The industrial visit was organized by the technical councils of the college viz. IIC-FrCRCE, IEEE-WIE, ASME, ACM & CSI who handled every detail – right from the planning to execution. Leading the group were Ricky Stanley of B.E. (Electronics Engineering), Akshay Dixit of T.E. (Production Engineering) & Sahil Gupta of T.E. (Computer Engineering).	Self Driven	Quarter II (27 Dec- 4 Jan) 2020
53	International Conference on Advances in Computing, Communication and Control (ICAC3-2019)	It is a Two-day International Conference on advance topic where activities like paper presentations, panel discussions and invited talks will be conducted.	Self Driven	Quarter II (20-21)-12-2019
54	Advanced Deep Learning Workshop	Provides exposure to identify possible innovative application development in the area of Deep learning.	Self Driven	Quarter II (20-21) Dec 2019
55	Clean and Beautiful Surroundings innovations	special camp of seven day to Tandulwadi in Safale, which is in the outskirts of Mumbai. The main aim of the special camp was to repaint the outer wall of the lower Marathi medium school present in the village and to provide basic computer training to the students of the 7 th standard	Self driven	Quarter II (15-22) Dec 2019
56	Innovation Day Campaign	Celebrate Innovation Day on 15 th October 2019 to mark Dr. A. P. J. Abdul Kalam's Birth Anniversary.	IIC	Quarter III 15-10-2019
57	Design Thinking	One Day Workshop -Product Design	IIC	Quarter II 03-10-2019
58	Product Development	Story Telling	IIC	Quarter II



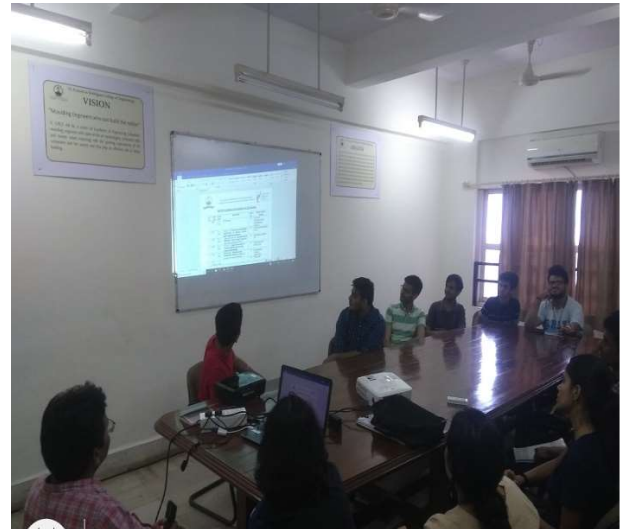
	Phases			01-10-2019
59	Progress Monitoring and Upload of 2nd Quarter Action Plan with Minutes of Meeting of Council	Mandatory activity	IIC	Quarter II 31-08-2019
60	Entrepreneurship and Innovation as Career Opportunity	One Day Workshop	IIC	Quarter I 25-09-2019
61	Design Thinking/Ideation	Workshop on Design Thinking	IIC	Quarter I 23-09-2019
62	Software Design Workshop	one day workshop Innovative methods to be used in software design conducted by doctoral research scholar Prajish Prasad from IIT Mumbai	Self Driven	Quarter I 23-09-2019
63	Field Visit	Field Visit/Scouting to nearby places to identify real life problems and define problem statements accordingly.	IIC	Quarter I 21-09-2019
64	Formulate Council, Upload of 1st Quarter Action Plan with Minutes of Meeting of Council	Formulate IIC council and upload the requested documents	IIC	Quarter I 31-08-2019 13-09-2019
65	Synergy Hackathon (Campus) 1 day (12 hours)	In-Campus Hackathon where the students working on problem statements with innovation while solving.	Self Driven	Quarter I 31-08-2019
66	My Story - Entrepreneur's Life & Crossroad	Motivational Speak - Shared by Entrepreneurs		Quarter I 07-08-2019
67	India First Leadership Talk Series	India First Leadership Talk Series with Hon'ble HRD Minister Shri Ramesh Pokhriyal 'Nishank'.	MIC	Quarter I 07-08-2019
68	Idea validation, Business Opportunity Identification and Business Model Development	This session is conducted by Prof. Hitendra Vaishnav to foster a Vibrant Entrepreneurial Ecosystem among our young students to convert India into a Global Manufacturing Hub. Our Vision is to achieve Start-up India and Stand up India.	IIC	Quarter I 05-08-2019

PHOTOS

Meeting



Meeting



My Story



Field Visit- MICA



Workshop one Problem Solving



Entrepreneurship and Innovation as Career Opportunity



AI Campus Hackathon



Idea Validation



Software Design Workshop



Product Development Phases



Product Design



Demo Day



Field Activity on Waste Management



Industrial Visit

Industrial Visit



Field Visit – Railway



Womens Day – My Story Entrepreneur



Advance Deep Learning Workshop



Idea Competition



Hangout with successful startups- Internship Expo



Business Plan



SIH

SIH



IPR



IIC-FrCRCE 2.0

A Talk on "HOW TO CONVERT YOUR PROJECT IDEA INTO A BUSINESS MODEL"
 By Prof. Hitendra Vaishnav

Date: 20th Jan 2020
 Time: 2:00 pm
 Venue: Samvardan Hall

INNOVATION DAY



IIC-FrCRCE (2019-2020)



REPORT
INSTITUTE INNOVATION COUNCIL
Nov 2018- April 2019

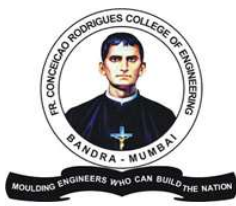
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LIST OF EVENTS (NOV 2018-APRIL 2019)

Sr.No	Type	Title	Date
1	Launch	Launch of Institution Innovation Council-Fr.CRCE. The Council formed and application submitted to HRD on Acceptance to council formation.	21-11-2018
2	Leadership Talk	India First Leadership Talk by Shri. Anand Mahindra, Chairman, Mahindra Group	08-01-2019
3	Workshop	Workshop on “ IPR for Students and Faculty Members ”	10-01-2019 1.30PM to 3.30PM
4	Workshop	Offline workshop on “ IPR for Students and Faculty Members. ”	10-01-2019 10.00AM to 12.00
5	Leadership Talk	Episode 02 of India First Leadership Talk with Dr. Anand Deshpande, Founder, Chairman & Managing Director Persistent Systems Ltd. on theme “ Planning for Career, Future industry trends and Startup ”. This was an hour long program	24-01-2019 11.30AM to 12.30PM
6	Workshop	Cognitive Skills, Design Thinking and Critical Thinking by Mr. Yogesh Naik, Design Thinking Practitioner and TCS Expert.	28-01-2019 10.30AM to 12.30PM
7	Competition	Idea Competition Invite innovative Ideas from students of your Institution from various departments to solve the problems related to at least two/all of following themes- 1. Agriculture & Rural development 2. Health Care 3. Energy 4. Environment 5. Others	16-02-2019
8	Leadership Talk	Episode 03 of India First Leadership Talk with Dr. Ajit Doval, NSA, Govt. of india on “ Art of Decision Making ”	21-02-2019 11.30AM - 12.30PM
9	Design Competition	Design Competition for Proof of Concept Development. This is the next step after the "Idea Competition". Selected Ideas at the end of the Idea Competition should be invited to give a presentation to the Evaluation Committee based on their idea submitted. IICs should organize Design Competition / Workshop for awareness among students who submitted the idea to designing and development of Proof of Concept of Idea submitted.	20-04-2019
10	Voting Campaign	Voting awareness Activities	12-04-2019
11	PoC submission	Proof of Concept Submission video conference meeting with MIC	17-06-2019

PHOTOS

India's first leadership talk series by Mr. Anand Mahindra.



Workshop on IPR By Dr. Bhushan Patil





On January 24 th , an informative and helpful webinar on leadership talks by Dr. Anand Deshpande (Founder, Chairman and Managing Director of Persistent Systems Ltd.)



The offline workshop was organized by Innovation council IIC-FrCRCE for “Cognitive Skills, Design Thinking and Critical Thinking” by Mr. Yogesh Naik, Design Thinking Practitioner and TCS Expert.



Institution Innovation Council

(IIC-FRCRCE)
Session on
“Cognitive Skills, Design thinking and Critical thinking”
Date: 28th Jan 2019 Time: 10.30-12.30
By



Mr Yogesh Naik
Design Thinking Practitioner & TCS Expert



INDIA FIRST LEADERSHIP TALK SERIES
 Talk on: Art of Decision Making
Tuesday, 19 March 2019, 11:30 AM

Watch on

SWAMY PRABHA, GYAN, TATA SKY TV #755, AIRTEL TV #442, SUN TV #596, DEN TV #526, DD TV #297, HATHWAY TV #473

LIVE www.facebook.com/mhrdInnovation
 YouTube <https://www.youtube.com/mhrdInnovationcell>
<http://iqnuonline.ac.in/qvandarshan>
www.mic.gov.in/live.html

mhrd_innovation

INDIA FIRST LEADERSHIP TALK SERIES
 Talk on: Future of Technical Education in India
22 April 2019 at 12PM

Watch on

LSTV लोक सभा, TATA SKY TV #598, AIRTEL TV #346, DISH TV TV #695, DISH TV #329, HATHWAY TV #276

LIVE www.facebook.com/mhrdInnovation
 YouTube <https://www.youtube.com/mhrdInnovationcell>
<https://loksabhatv.nic.in>
www.mic.gov.in/live.html

mhrd_innovation

IIC – Voting Campaign



IIC - Idea competition



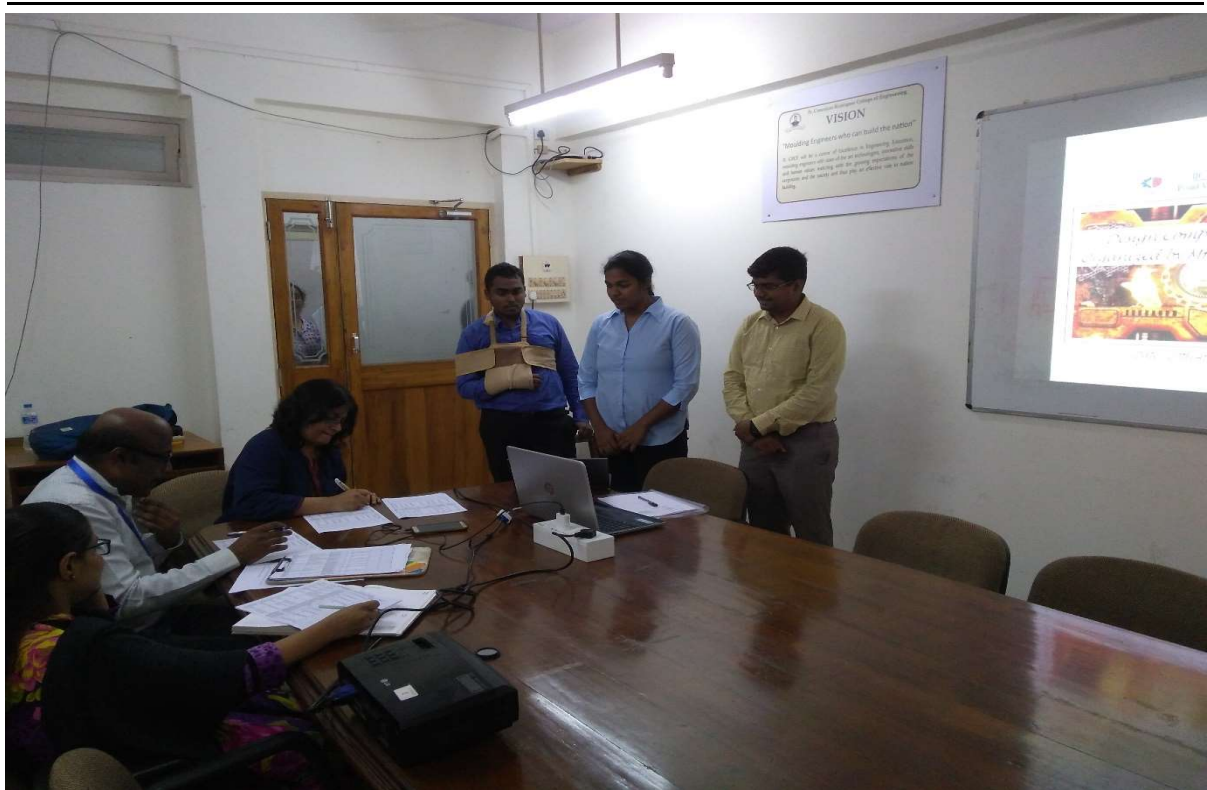
IIC- Industrial Visit at SPIT incubation Center



IIC- Design competition



Date : 20th April 2019



Experiential learning and innovations by technical project teams

Project Cell:

Established in 2014, PROJECT CELL is an endeavour to promote innovative thinking amidst young minds. We work towards accomplishing tasks that could be gradually developed on a large scale and solve many social problems that exist today. At Project Cell, we tread towards learning new concepts, techniques and gaining practical experiences on implementation of Creative ideas out. The main goal of the Cell is to learn new technologies while developing new projects. The project cell has worked on projects involving technologies like IoT, Machine Learning, Artificial Intelligence. Some of the projects developed by project cell are face recognition based door lock , Automatic medicine vending machine, Delivery robot , Agribot , Room automation using remote control. Project cell participates in E-yantra Robotics and Innovation challenge competitions held at IIT Mumbai. Project “sowing seeds and removing weeds using SWARM ROBOTICS and functional programming” reached the final stage of the E-yantra robotics challenge . Project Pani puri vending machine and Coconut harvester won the best hardware design competition in Eyantra innovation challenge competition in 21-22 and 19-20 respectively.

<https://eyic.e-yantra.org/>

Team Abadha:

TEAM ABADHA CRCE is a cadre of ardent & assiduous students from Fr. Conceicao Rodrigues College of Engineering. Team Abadha CRCE builds a One-Manned Electric-All Terrain Vehicle which is capable of keeping its ground in the roughest of terrain and in the most challenging conditions. The team was founded in the year 2012 and is the oldest team in our college. It was initiated by inquisitive coterie of students under the guidance of Prof. D.S. Sudhakar. Living up to its name (Abadha means Unstoppable in Sanskrit) the team every year overcomes all the impediments and is achieving greater heights. We participate in SAE E-Baja Competition. Every year the team makes a fresh start and is sedulous to achieve its goal. The performance graph over the years is improving at a remarkable rate. The team has come a long way from being Overall AIR 78 in its very first attempt to being Overall AIR 5 in 2020. The team also secured AIR 1 in Sales Presentation.

<https://teamabadhaofficial.web.app/>

Team CFR:

Team CRCE Formula racing, established in the year 2016, involves aspiring and promising engineering students of various branches and encourages them to come together with an idea of building their own “Formula Student’s Race Car” and compete with various other teams nationally and internationally in competitions like Formula SAE (*established in 1980, Texas*). The team involves the collaboration of Production, Electronics, Computers and IT to build a race car which performs to its best in various dynamic events such as Technical Inspection, involving mechanical Inspection, Tilt test, Noise test, Brake test, Skid pad, Acceleration,

Autocross, Endurance and Efficiency. Static events such as Cost and manufacturing analysis, Design report, Business Plan Presentation are also conducted. The team members Design, analyze, manufacture and test their car in the given deadlines based on their own criteria. The team participated in SAE Supra in the year 2017 achieving the national rank of 47. In 2017 and 2018 the team participated in Formula Bharat achieving 27 and 24 rank respectively at national level coming 2nd in Mumbai, clearing Technical inspection.

<https://crceformularacing.com/index.html>

Team Mavericks:

The maverick's team of FRCRCE is a technical team that works on the development of drones and other aerial vehicles. The team focuses on creating UAV's that are better, cost effective and efficient than the other UAV's available in the market. Team takes part in different national and international competitions as a way to test their abilities with the motto 'To do the best we can do.' With each competition that they take part in, they try to bring in something new to the world of aerial flight systems.

<https://mavericks-7734b.firebaseio.com/>

Team Vaayushastra:

Team Vaayushastra was established in the year 2012 to represent Fr. Conceicao Rodrigues College of Engineering in the SAE Aero Design Competition. Since that year, team have participated annually in the advanced class of the SAE Aero Design Competition, held in the United States, 9 times. They have been one of the most consistent teams by finishing in the worldwide top 10 rankings, 7 times. The team is formed by 30 undergraduate students from different departments of the college who have the aptitude and interest conducive to the competition.

<https://vaayushastra.com/>

Team Robocon:

Team Robocon CRCE is a *robotics team* from Fr. Conceicao Rodrigues College of Engineering, Bandra (W). We are a group of budding undergrad engineers who make robots to participate in Robocon India. We are a group of robotics enthusiasts with diverse technical backgrounds, constantly striving to solve real-life problems using artificial intelligence and robotics mechanisms. Launched in 2013 to compete in Asia's largest competition, ABU Robocon, Robocon CRCE has since diversified into various competitions and research directions. In every contest we participate in, we strive to bring something new to the world of robotics. Our team consists of computers, electronics, and production subsystems that work together to build a functioning and usable bot.

<https://roboconcrce.org/>

ECell CRCE:

The mission of ECell CRCE (Entrepreneurship Development cell) is to germinate the idea of entrepreneurship and develop the students to face the entrepreneurial challenges of tomorrow. The vision is to develop a strong relation between our students with our experienced alumni and experienced members of the business fields, allowing our students to have a dynamic mindset before starting their entrepreneurial voyage. With this Mission, Vision, and Values, this council plans to follow as a group and as individuals for the betterment of the entrepreneurial ecology of our prestigious institution and thus helping the students of Fr. Conceicao Rodrigues College of Engineering.

www.Ecell.github.io



SOCIETY OF ST. FRANCIS XAVIER, PILAR'S

FR. CONCEICAO RODRIGUES COLLEGE OF ENGINEERING

(Approved by AICTE & Affiliated to University of Mumbai)

Fr. Agnel Ashram, Bandstand, Bandra (W), Mumbai - 400 050.

Phone : (022) 6711 4000, 6711 4101, 6711 4104 - Fax : 6711 4100

Website : www.frce.ac.in • Email : crce@fragnet.edu.in

Application Title : Making "Deep Learning and AI skills" mainstream in India to fulfil triateral needs of entrepreneurship, Industry-academia partnership and application-inspired Engineering Research

We confirm our Support, partnership and collaboration for the Application made by Prof. Deepak Garg of Bennett University.

The objectives of the project are of great relevance to us because it is unique in its mission and plans. Deep Learning, Machine Learning and Artificial intelligence are increasingly becoming the must-have skills for faculty, students and researchers in different engineering domains. Our institution is aspiring to inculcate this technology for the benefit of our stakeholders and the country.

We are pleased and excited to work with Prof. Garg for successfully executing this project. We understand that Bennett University has a great supercomputing infrastructure and accomplished faculty, which will of high value for this engagement.

Our faculty will get trained on futuristic technologies which in turn will help us to train our students. After that we will be able to start a research group who will follow up these activities with student projects, publications, curriculum enhancement. As there are Industry partners also in the project, so it will help us in connecting with the industry and start-ups to get ourselves involved in some real projects.

We are happy to know that we have been chosen as a lead institution in our zone.

We will support the project in terms of manpower, local support and infrastructure. We will nominate five of our good faculty to get trained, set up a research group. World of opportunities will be open after this and group will flourish based on the further engagements and opportunities.

We will support faculty exchange, student interns or other similar offerings required for the project. Our facilities can be used to hold workshops for Tier 2 and Tier 3 Institutions to spread the learning to remote institutions of the country.

Institutional Information

Years institution has been in existence: 34 years

Engineering courses offered:

Undergraduate Courses:

1. Production Engineering,
2. Electronics Engineering,
3. Computer Engineering and
4. Information Technology

..2/-



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Website : www.frccce.ac.in • Email : crce@fragnel.edu.in

: 2 :

Post-Graduate Courses:

1. Mechanical Engineering (CAD-CAM with Robotics) and
2. Electronics Engineering

students and staff(faculty): 1150 students and 71 Faculty members


of research groups: 03

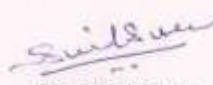
Indicators of track record (rankings, awards etc):

- NIRF ranking (150-200 group)
- NBA Provisionally Accredited three programmes (Computer Engineering, Electronics Engineering and Production Engineering) out of four. Period of accreditation 2017-18 to 2019-20.
- Most sought-after college for admission.

Link to website for engineering faculty: www.fragnel.edu.in

Two-Three lines about the institution: College was established in 1984. The college is affiliated to University of Mumbai and has acquired a good reputation, among corporate and peer academic institutions, for its academic standards. The college offers under-graduate programmes in Production Engineering, Electronics Engineering, Computer Engineering and Information Technology, post-graduate programmes in Mechanical Engineering (CAD-CAM with Robotics) and Electronics Engineering and doctoral programmes in Electronics Engineering and Mechanical Engineering.


Dr. Srija Unnikrishnan
Principal


Dr. Sunil Surve
Professor