



RV College of Engineering®

CENTERS OF EXCELLENCE



ABOUT RVCE

RV College of Engineering® (RVCE) established in 1963 is one of the earliest self-financing engineering institutions in the country. The institution is run by Rashtreeya Sikshana Samithi Trust (RSST) a not-for-profit Trust. RVCE is an Autonomous college. Currently, the institution offers 15 Bachelor, 14 Master Programs and 15 departments have Research Centres, affiliated to Visvesvaraya Technological University (VTU) Belagavi.

MISSION

- To deliver Outcome Based Quality Education, emphasizing on experiential learning with the state-of-the-art infrastructure.
- To deate conessive an trougentir interdicalin eyesich individuatirowth, discipline, integrity, ethics and social sensitivity.
- To nurture industry-institution collaboration leading to competency enhancement and entrepreneurship.
- To focus on technologies that are sustainable and inclusive, benefiting all sections of the society.

VISION

To nurture industry-institution collaboration leading to competency enhancement and entrepreneurship.

QUALITY POLICY

Achieving Excellence in Technical Education, Research and Consulting through an Outcome Based Curriculum focusing on Continuous Improvement and Innovation by Benchmarking against the global Best Practices.

CORE VALUES

- Professionalism
- Commitment
- Integrity
- Teamwork
- Innovation

CENTERS OF EXCELLENCE

- COE in Microelectronics
- COE in Internet of Things (CISCO - RVCE)
- COE in e-Mobility
- Centre for Education & Digital Learning Research (CEDLR)
- COE in Smart Antenna System & Measurements (SAS)
- COE Computational Genomics
- Centre for Quantum Computing
- Logistics & Supply Chain Management
- Centre for Hydrogen and Green Technology
- Centre for CCTV Research
- COE in Cognitive Intelligent System for Sustainable Solutions
- Women in Cloud : Center of Excellence in India
- Centre for AI Research and Business Solutions
- Centre for Visual Computing
- Autonomous Vehicles(WIRIN)
- Sensors & Sensors Application Technology
- Integrated Circuits & Systems

96th

**NIRF Ranking in
Engineering 2023**

IIRF 2023

Engineering Ranking India

**National Rank-10
State Rank-02
Zone Rank-05**

AAA

**Rating in NPTEL local chapter
(Jan-April 2024)**

**1 - State Ranking
16 - National Ranking**

1501+

**Times Higher Education World University
Rankings-2024**

601+

Asia University Ranking - 2024

1001+

Subject Ranking (Engineering)

801+

Subject Ranking (Computer Science)

1501+

**IMPACT
Ranking**

Interdisciplinary Research & Innovation – A Preamble

Interdisciplinary research is a type of study or research that draws from two or more disciplines in order to gain a more well-developed perspective or discover something new. Interdisciplinary research is growing in popularity and is increasingly seen as essential. Multiple perspectives on research challenges will often lead to better outcomes. In order to streamline and undertaking focused research, the institution has followed the following approach for execution of funded projects and industrial consultancy. Also to develop competency in students and faculty.

- 1. Identifying Thematic Areas of Research:** Carrying out SWOC analysis of the institution and aligning goals inline with Thrust areas of Govt. & Industry is helping identifying need based areas of research. Thrust areas are identified through road maps, govt. policy documents, Vision 2035, UN SDG 2030, funding agency requirements and such others.
- 2. Aligning with existing infrastructure and identifying new infrastructure needed:** The institution has separate PG / Research budget to cater to new equipment's and seed funding for students and faculty. Many companies and funding agencies have helped in establishing physical infrastructure and state of the art equipment and software are provided over a period of time.
- 3. Assigning Team:** Based on the specialization and competency of the faculty, various interdisciplinary teams are formed to undertake need based research, execute projects and consultancy assignments.
- 4. Developing Modules and providing training:** The newer areas of science and technologies need learning through training from experts. Based on the need of the faculty, training in thematic areas are provided through institutional funding and providing seed funding for initial experimentation & Simulation, wherever needed. Mentoring by Industry & Research Experts in the thematic areas are also taken up for better understanding of the need and execution.
- 5. Executing work as per standards:** Funding agencies and industries expect deliverables in terms of products, processes and systems, which are scalable. Efforts are made to execute the projects and consulting work based on the goals set and measured through publishing in peer reviewed journals, developing prototypes and obtaining Patents and copy rights.
- 6. Reporting periodically & Scale Up the CoE / CoC:** Documentation of the work carried out and submitting to the agencies is a continuous assignment and also helps future work to be undertaken. The whole exercise of interdisciplinary research and innovation is also helping in developing incubation center and Start-ups for commercialization of IPs, and alternate Revenue generation for sustainability.

The above approach is adopted to make sure learning happens to UG / PG / PhD students in a expected way. The students are understanding the advantages of working in interdisciplinary way. As an offshoot of this exercise, many interdisciplinary and innovative courses / internships / projects / electives / skill labs are developed. This also meets the requirements of NEP -2020 and increasing the employment opportunities for students.

Hope this approach and effort helps the institution, in particular and Nation, in general in developing new products and systems for better economic development of the country.



1. Macroelectronics

The CoE Macroelectronics is established in 2013 under TEQIP-II, sub-component 1.2.1 and is designated as Inter-Disciplinary Research Center (IDRC). The focus of the IDRC is on thin film deposition, synthesis, and characterization of emerging materials for novel applications including wearable electronics, flexible displays, sensors, energy harvesting nanogenerators, tribological functional coatings, e-skin, and biological devices. Emphasis is given to sustainable next-generation IoT sensors, organic solar cells, large-area printed & flexible electronics material growth, scalable processes, and product development.

Areas of Expertise

Thin Film Fabrication & Characterization

- State-of-the-art in-house fabrication and characterization facility
- Development of novel materials and devices
- Tribological, optical, anti-reflection, and protective coatings

Skill Development

- Training/Workshop/FDP on fabrication and characterization equipment
- Technology transfer, prototyping, and product development on smart materials, devices and sensors



Sensor Development & Prototyping

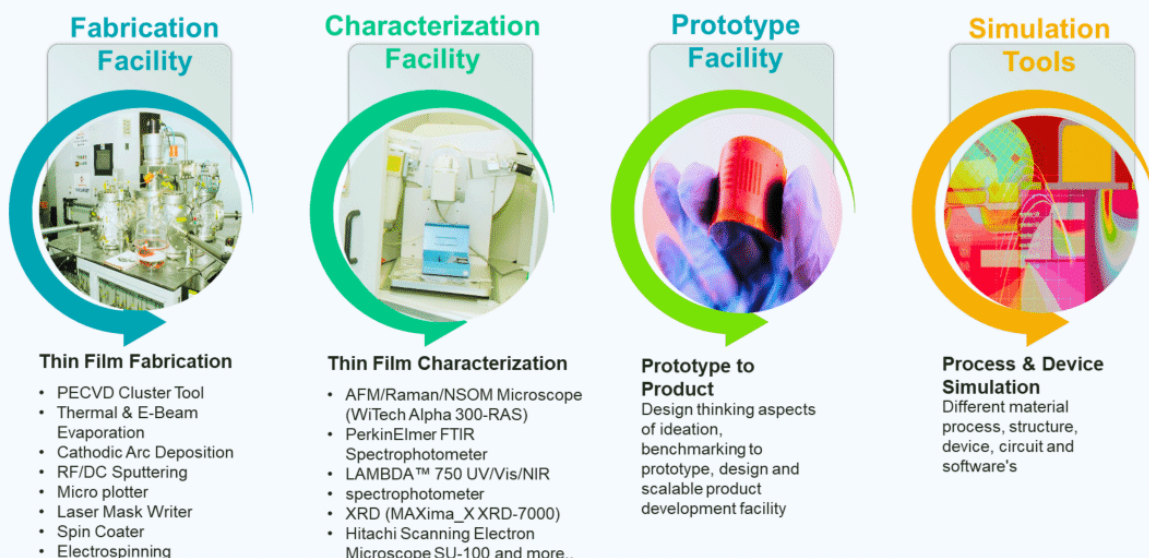
- Gas sensors Fabrication and Testing
- Biological sensors and Testing Facility

Solar Cell -PV & Energy Harvesting Technologies

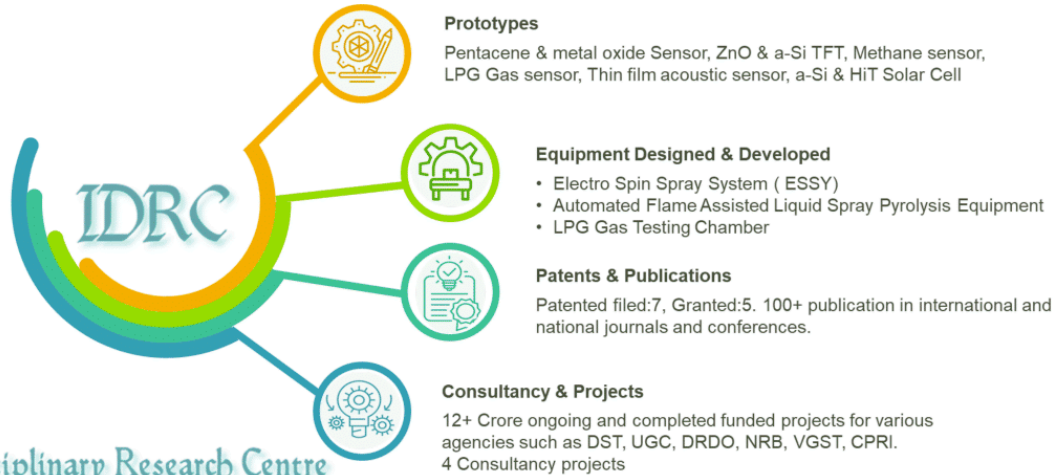
- Design and Development of A-Si/C-Si HiT Solar Cell
- Polymer-based Solar Cell
- Development of Piezoelectric, Triboelectric nanogenerator (TENG), MEMS, and Super Capacitor

Facility & Infrastructure

The IDRC has state-of-the-art indigenous fabrication & characterization facilities for material growth, thin film deposition, and device development including vacuum-based deposition, wet chemical processing, tribological, optical, and electrical characterization. Assistance to Ideation, prototyping, and product design are provided along with the consultancy services.



Achievements

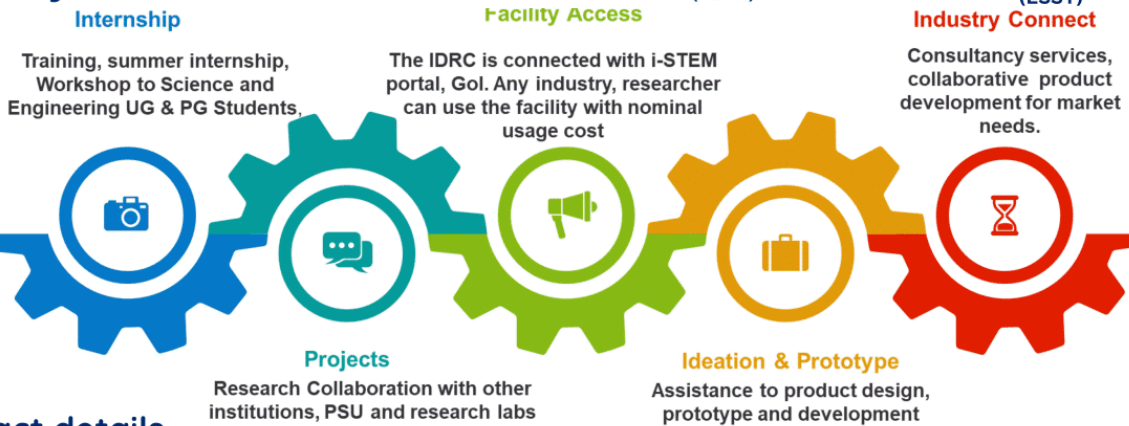


Interdisciplinary Research Centre

Funding Agencies



Activity & Research Collaboration



Contact details

Dr. H N Narasimha Murthy
Professor, Dept. of ME
narasimhamurthyhn@rvce.edu.in
Ph No: +91-9901745089

Dr. Uttarakumari M
Professor, Dept. of ECE
uttarakumari@rvce.edu.in
Ph No: +91-9945336808

Dr. Ramavenkateswaran N
Assistant Professor, Dept. of ECE
ramavenkateswarann@rvce.edu.in
Ph No: +91-9986165427

2. Cognitive Intelligent Systems for Sustainable Solutions

RVCE - HPCC Systems

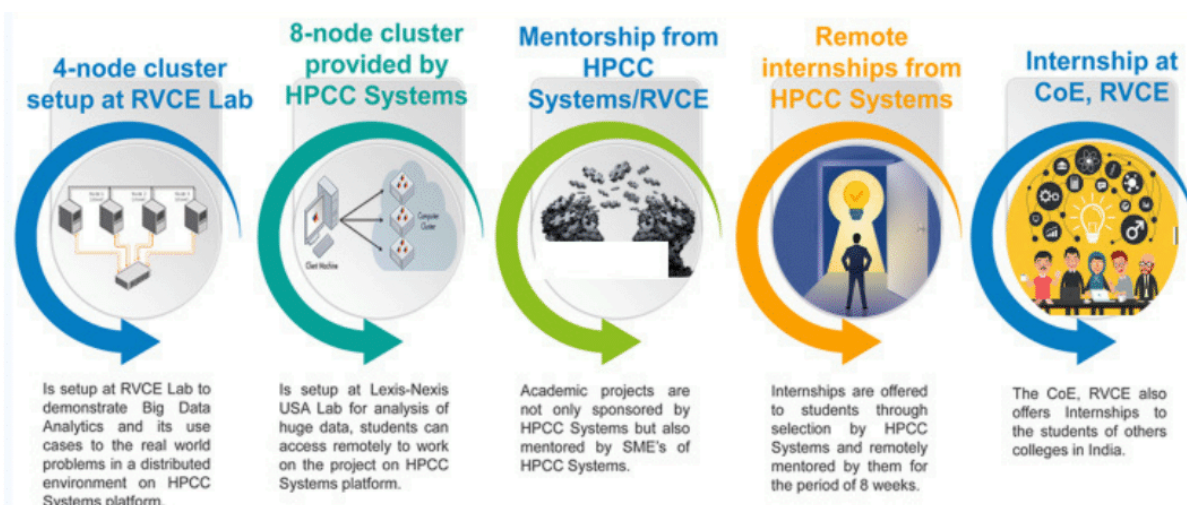
RV College of Engineering in collaboration with HPCC Systems and LexisNexis Risk Solutions established CISSS in 2017. Funding research projects, and offering industry-based elective courses and internships to students are some of the motives for the collaboration. CISSS will emphasize on advanced interdisciplinary research activities in the area of Cognitive Intelligent Systems with assistive technologies to cater to the needs of industry and society. CISSS seeks collaboration with national and international institutes, partnerships with social institutions and industries to realize its goals.

Areas of Expertise



Facility & Infrastructure

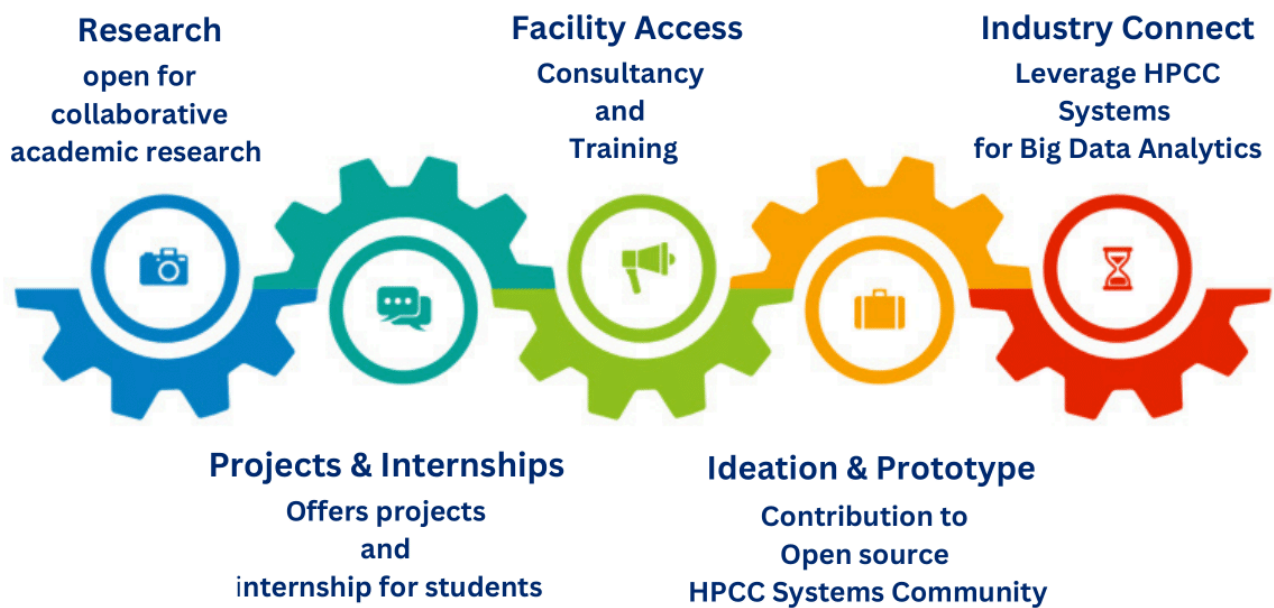
The centre is well equipped with the necessary computational infrastructure and software tools.



Achievements



Activity & Research Collaboration



For more details :



Contact details

Dr. Shobha G
Professor, Dept. of CSE (Data Science)
shobhag@rvce.edu.in
Ph No:+91-9480280273

Prof. Jyoti Shetty
Assistant Professor, Dept. of CSE
jyothis@rvce.edu.in
Ph No:+91-9900052901

3. Internet of Things

CISCO-RVCE

Develop employable human resource to meet the challenges in the field of IoT. Strengthen laboratories for training, design, implementation and maintenance. Establish a competence centre in research and innovation across various verticals of IoT. Create technology business incubation centre for IoT.

Areas of Expertise



Facility & Infrastructure

The centre was initiated with the support of CISCO in 2016-17 with a fund of 3 crores for 3 years. CISCO-RVCE-CoE-IoT has provided the necessary Infrastructure for different groups of faculties to create training programs, hackathons, makathons, and proof of concepts. Currently, 40 lakhs worth of sensors, actuators, development boards, and other devices are available across different groups of faculties.

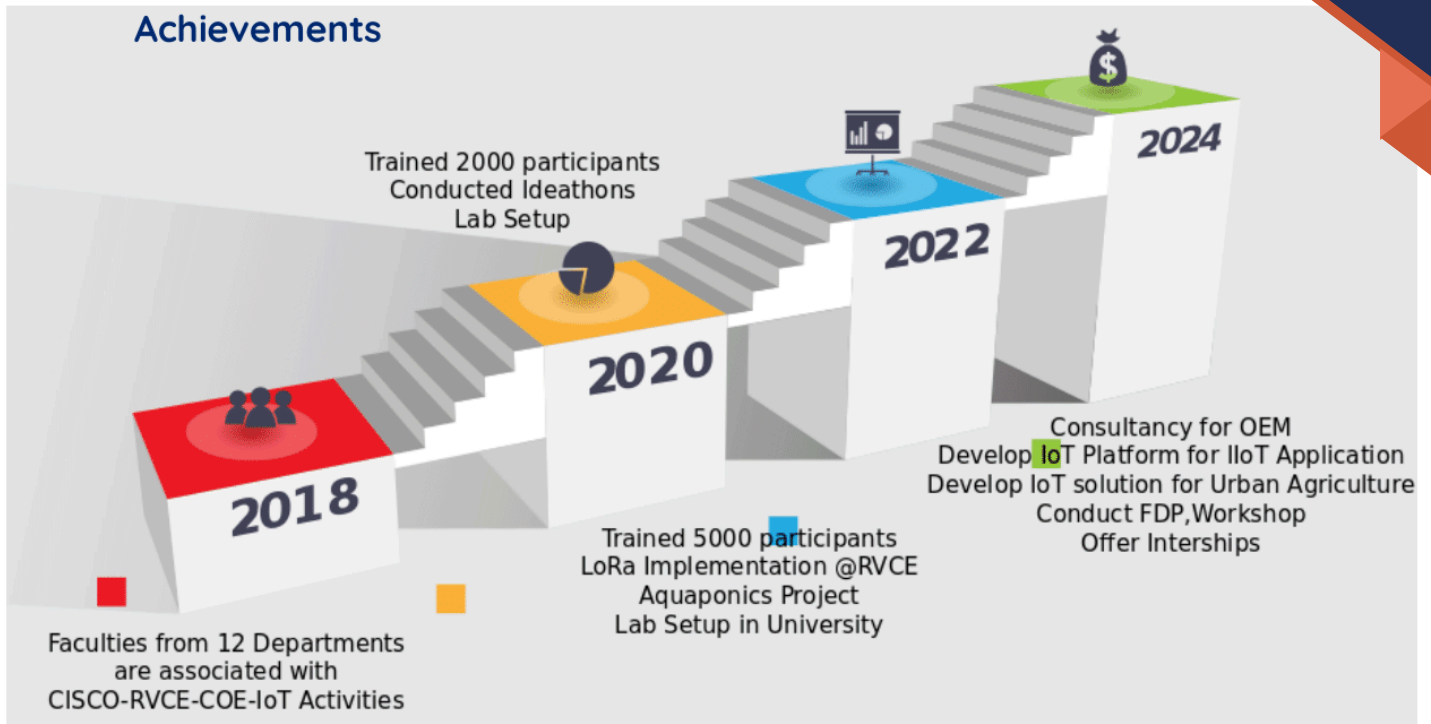


11 lakhs worth
LoRa based
infrastructure

40 lakhs worth
Aquaponics facility to develop
IoT platform for Controlled
Environment agriculture

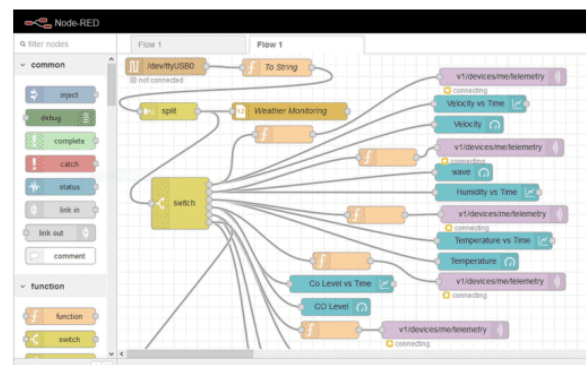
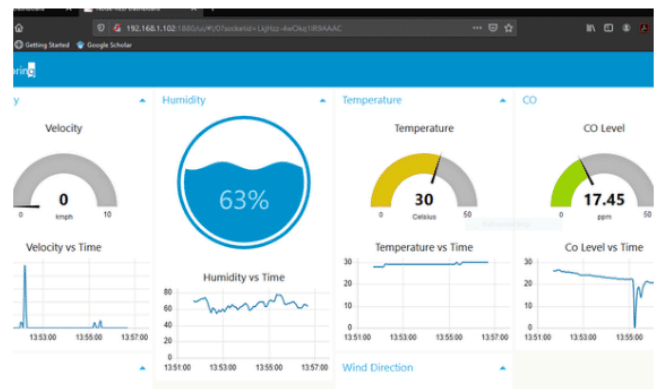
40 lakhs worth
IoT Kits and 10 lakhs worth
Private Cloud Infra

Achievements



Activity & Research Collaboration

Training Programs
Faculty Development Programs
Internship
Product and Solution Development
IoT Platform Development
Industrial IoT Application Development



Contact details

Dr. Renuka Prasad B
Associate Professor, Dept. of MCA
renukaprasadb@rvce.edu.in
Ph No: +91-9901945674

4. Computational Genomics

Centre of Excellence - Computational Genomics is an integrated base set to provide solutions to challenges in the agriculture and healthcare research sectors.

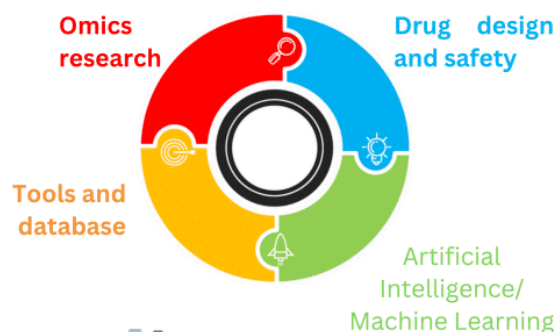
The prime focus of the lab is to establish a robust facility in computational biology to provide efficient solutions to research challenges. The center also provides skill development training to students leading to enhanced research ability.

The lab is expertised in Drug design, safety profiling and formulation studies. It also provides a comprehensive bioinformatics solution to omics research. We are pioneering in machine learning aspects of genomics and drug discovery. We can support tools and database development.

Funding Agencies



Areas of Expertise



Collaborations with



Facility & Infrastructure

High throughput genome analysis



OMICS analysis

NGS, Meta-genomic, Proteomics and Meta-proteomics analysis

High throughput Drug screening



Drug Discovery

Screen millions of drug candidates to provide lead compounds and perform lead optimization

Software



Simulations

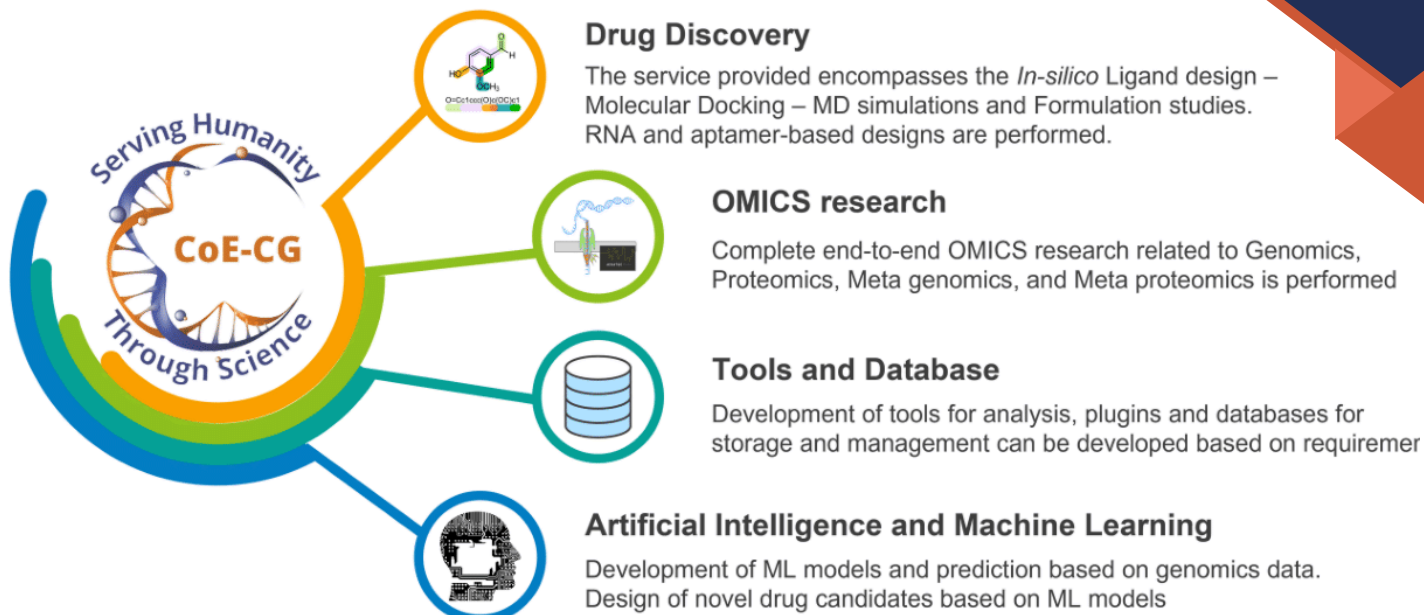
Open source and commercial software like Schrodinger, Omics box, J-OCTA, and MATLAB to name a few

Infrastructure

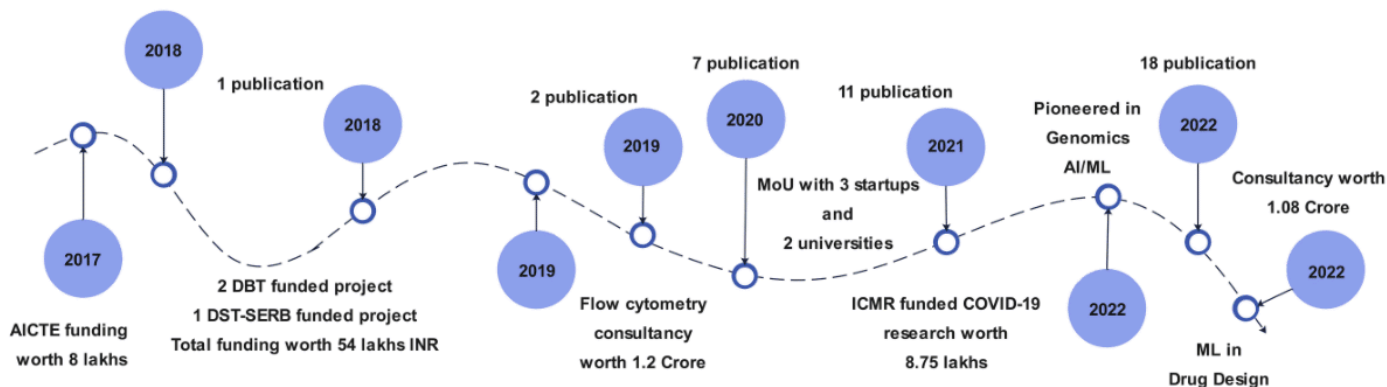


GPU and HPC

3 HPC and 4 NVIDIA GPU clusters, Storage server and G-Cloud suite



Journey and Milestones



Activity and Research

Research

We are open to academic research collaboration and funding opportunities with shared IP

Internship

Students can apply for Internships throughout the year for a nominal fee



Consultancy

Pharmaceuticals and startups can outsource the work on for a pre-decided fee.

Ideation

Involvement with start-ups to Initiate new ideas for fee or shared IP

Contact details

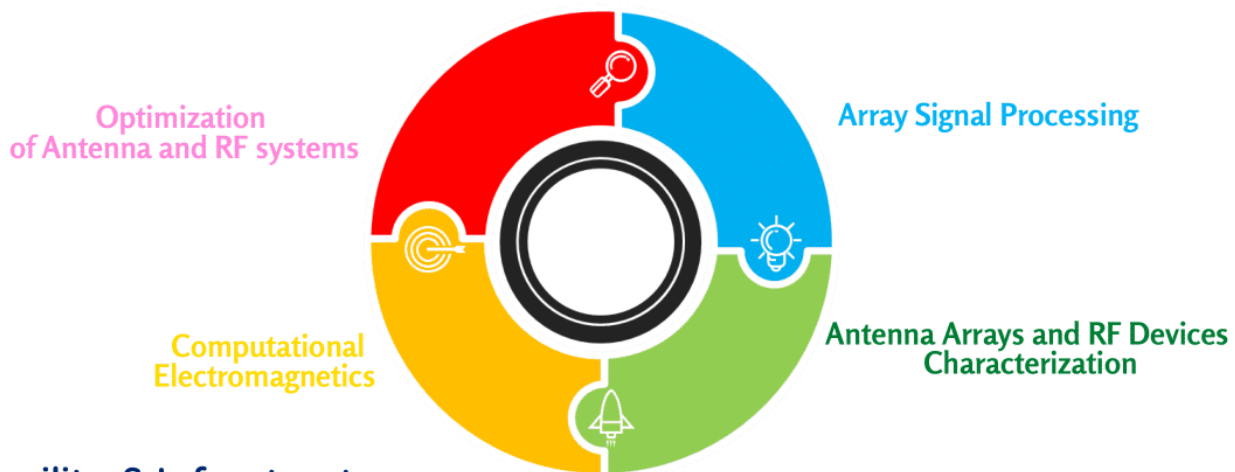
Dr. Vidya Niranjana
Professor and Head, Dept. of BT
vidya.n@rvce.edu.in
Ph. no: +91-9945465657

5. Smart Antenna Systems and Measurements

The centre of excellence in smart antenna systems and measurements specializes in the analysis, design, optimization and measurement of RF and microwave devices for wireless and defense applications. This facility is utilized for multiple activities such as:

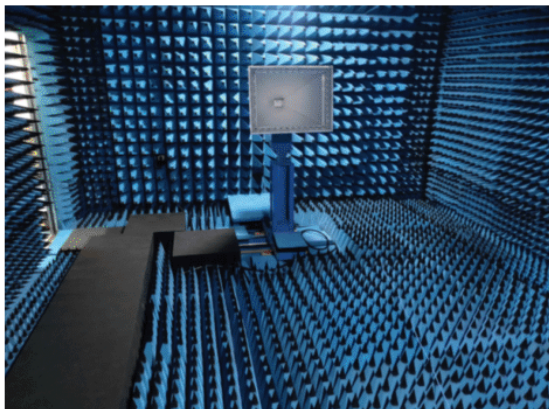
- a. R & D Activities: Design and Development of Antennas for cutting edge technologies
- b. Lab Facility: Antennas and RF Devices Characterization
- c. Student Internships and Faculty Training (In house/External)
- d. Consultancy Activities: Design, Development and Characterization of Antenna and RF Systems

Areas of Expertise



Facility & Infrastructure

- a. EM Simulation Software
- b. Anechoic Chamber
- c. Vector Network Analyzer
- d. RF Power Sensor
- e. RF Cables and connectors
- f. RF Phase Shifters for Beamforming



Anechoic Chamber operational up to 40GHz



Vector Network Analyser operational upto 40GHz

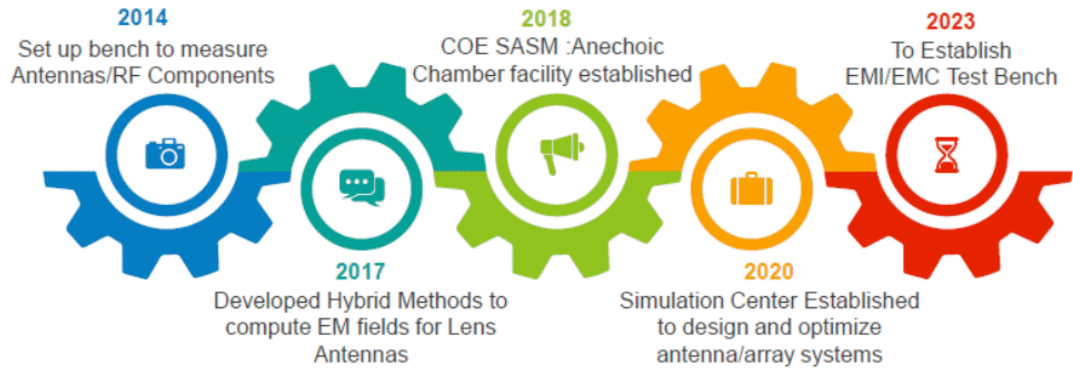


RF Power Meter - R&S®NRP-Z51



RF Phase Shifters for Beamforming

Achievements



Activities and Research

R&D Activates:

- Design and Development of Antennas and RF Systems
- Development of Hybrid Methods to compute fields of Antennas

Training & Internship Activities:

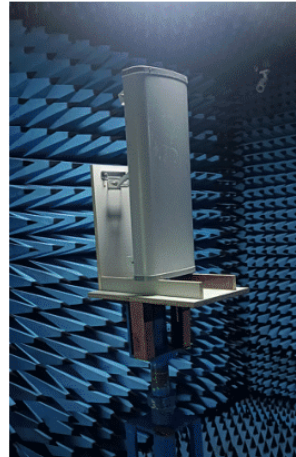
- Internship certificate with performance-based grading from Centre of Excellence in SASM and WavCom Pvt Ltd
- Invited talks from leading experts through IEEE APS/MTT/Comsoc.
- Faculty Developed Programme's i

Skills Imparted in COE-SASM

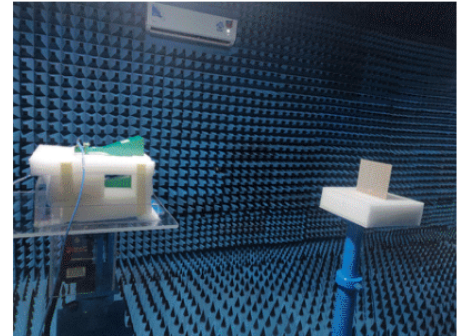
- Matlab Antenna Toolbox and Phased Array toolbox
- ANSYS HFSS- EM Pro SOLVER
- Cadence AWR & Keysight ADS
- LTspice software

Characterization & Measurements:

- Characterization of Antennas and RF devices
- Measurements of S-parameters /Reflection/Absorption coefficients of Materials



5 G Base station Antenna Measured in COE-SASM

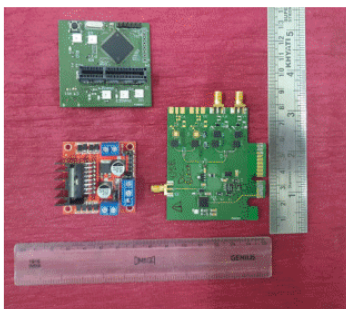


RADAR Cross Section Measured in COE-SASM

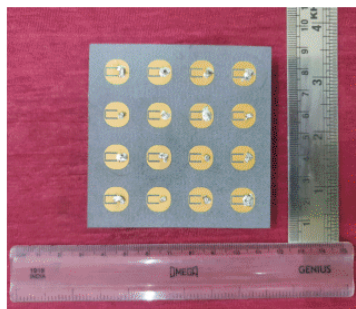
OUTCOMES

- **PATENTS PUBLISHED-01**
- **RESEARCH PUBLICATIONS -40**
- **INTERNSHIPS- 100 STUDENTS COMPLETED**
- **25+ PROTOTYPES DEVELOPED**
- **RESEARCH PROJECTS**
 - TWO ONGOING PROJECTS.
 - 8 PROJECTS COMPLETED
- **CONSULTANCY PROJECTS-**
 - 2 ONGOING PROJECTS.
 - 5 PROJECT COMPLETED
- **CONSULTANCY PROJECTS-**
 - 2 ONGOING PROJECTS.
 - 5 PROJECT COMPLETED
- **STUDENTS PROJECT: 25+ PROJECTS**

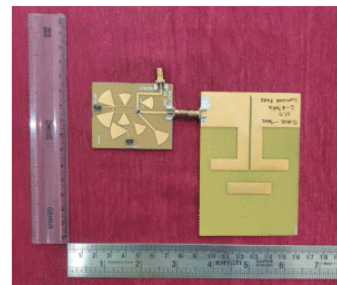
Prototypes Developed @ COE-SASM



RF-Beamforming Module



X-Band 4X4 Array Antenna



S-Band Active Antenna

Contact details

Dr. Geetha K S,
Vice Principal, RVCE
viceprincipal@rvce.edu.in
Ph No:+91-9900700990

Dr. Mahesh A,
Assc. Prof, Dept. of ECE
mahesha@rvce.edu.in
Ph No:+91-9886531812

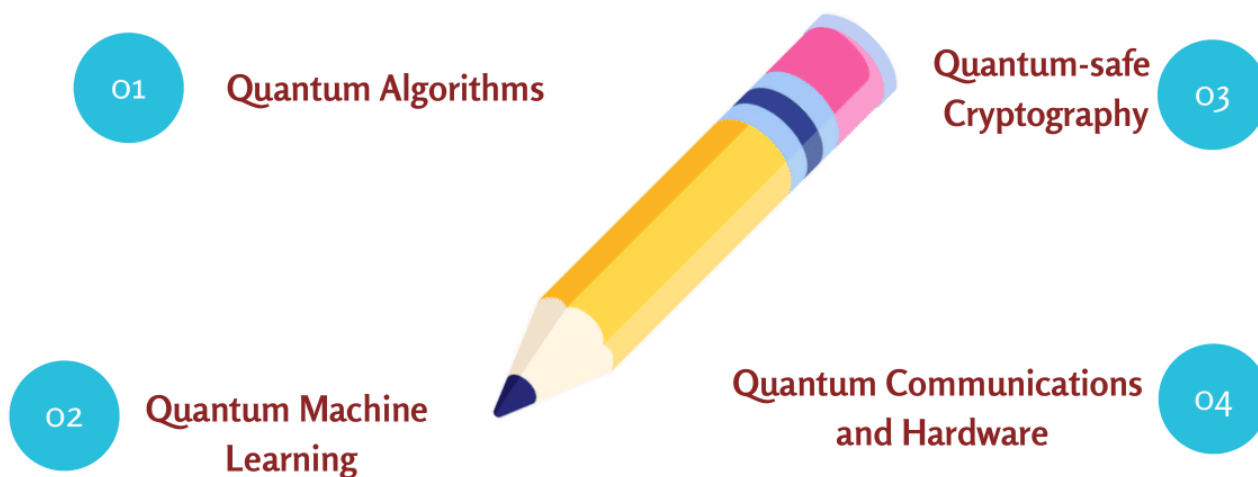
Dr. Shushrutha K S,
Assc. Prof, Dept. of ECE
shushruthaks@rvce.edu.in
Ph No:+91-9964179197

Prof. M. Shambulinga,
Asst. Prof, Dept. of ETE
shambulingam@rvce.edu.in
Ph No: +91-9916292488

6. Quantum Computing

The CIRQuIT (Center for Interdisciplinary Research in Quantum Information and Technology) is a group of passionate students and faculty of RVCE. The group works under the Center of Excellence in Quantum Computing to explore the potential of quantum computing technologies and algorithms for solving the 21st-century problems of industry and society. The CoE works with the vision *“To inspire young minds to take up research in Quantum Computing and develop viable solutions to real-world problems.”*

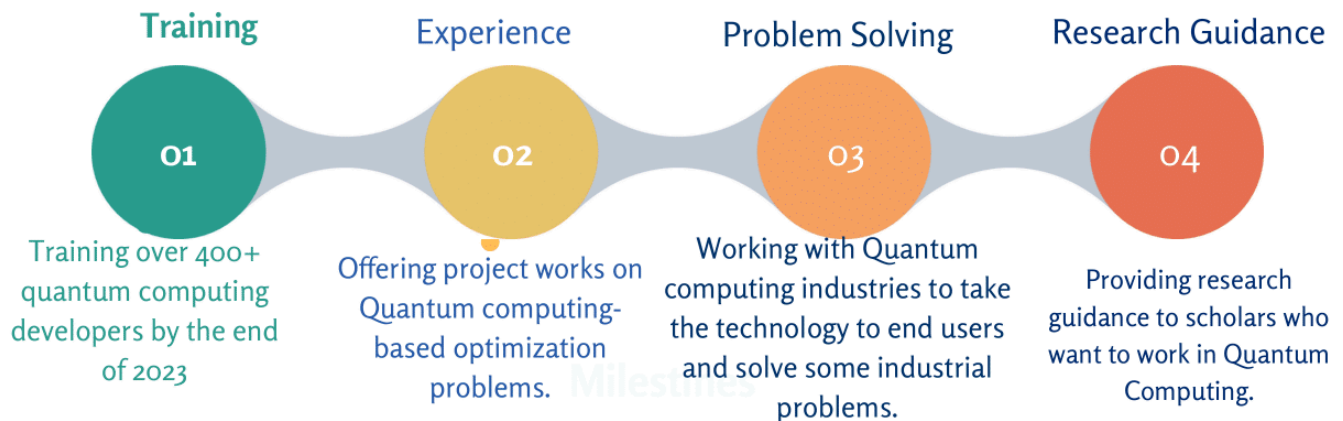
Areas of Expertise



Facility and Infrastructure

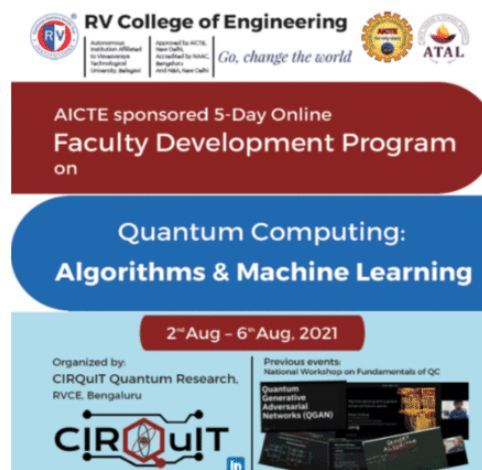
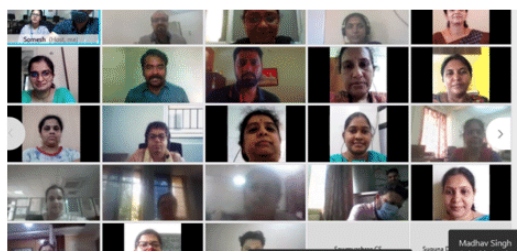
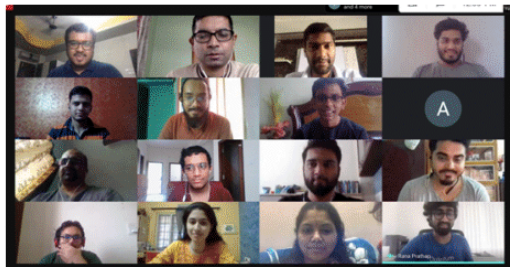
- 01 Expertise in developing quantum programs on the IBM-Quantum experiencevtechnology.
- 02 Researching Quantum Key Distribution(QKD) schemes applications in Cyber Security and Quantum Machine learning applications in Drug development
- 03 Quantum simulation experiences on Quantum Algorithms, Quantum Cryptography, Quantum Machine learning, and Quantum communication.
- 04 Training programs/Hands-on workshops for students and researchers on Quantum computing, Quantum mechanics, and Quantum mathematics.

Achievements



Activity and Research Collaboration

- O1** Conducted month-long industrial internships for students and research scholars.
- O2** Faculty development programs and hands-on workshops at the National level, sponsored by AICTE, IEEE, and others.
- O3** Funded project on “Experimenting the BB84 protocol to secure Smart grid communications”, sponsored by CySecK – Govt. of Karnataka.
- O4** Training and research collaborations with IBM.



Contact details

Dr. B. Sathish Babu
Professor and Head, Dept. of AIML
bsbabu@rvce.edu.in
Ph. No: +91-98444488329

Dr. Tribikram Gupta
Asst. Professor, Dept. of Physics
tgupta@rvce.edu.in
Ph. No: +91-9591970797

7. Connected Autonomous Vehicles WIRIN



The future of the automobile is electric, shared, autonomous and connected – a very exciting area. RV College of Engineering® (RVCE) has partnered with WIPRO and the Indian Institute of Science(IISc) to establish a Center of Excellence for Autonomous Vehicle Research at RVCE . The collaboration with WIPRO and IISc in a series of special programs devised by the WIPRO Innovation Center brings together the best automotive sector experts, researchers, innovators, companies and students to create a collaborative ecosystem at RVCE. The center seeks to focus on four key technologies for autonomous vehicles: sophisticated AI technologies for vehicle control, environment perception, route planning and vehicle navigation systems. It is a collaborative platform to observe an essential component of contemporary transportation networks.

Areas of Expertise

National Dataset Collection

- Data Set Collection from LiDAR, Camera & IMU
- Annotation of the Datasets
- Deep Learning Models for Annotation Automation

AI Stack Development

- Deep Learning Models for Perception, Localization & motion Planning.
- Embedded System Design for Vehicle Control Unit
- Sensor Integration : LiDAR, Camera, IMU etc



Mechanical Design

- 3D Model of Chassis
- FE Analysis
- Brake by Wire
- Steer by Wire

Powertrain Components Design

- Battery Design & Configuration
- Battery Management System
- Battery Health Monitoring System
- PID Controller Design
- Motor & its Controller

Vehicle Simulator

- HD Map Creation
- Vehicle Modelling
- Scenario Generation on Road Runner.

Lab & Infrastructure

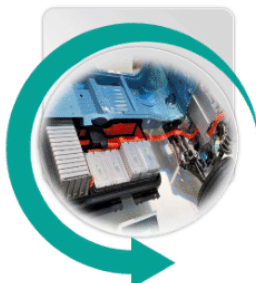
Sensor



Sensor Integration Through ROS

- LiDAR
- Camera
- IMU, Ultrasonic Sensors
- Temperature Sensors etc.

Powertrain



Testing of Battery, Motor & Controllers

- EV Simulator
- Battery Testing
- Motor & its Controller Test Jig
- Battery Management System

CARLA & National Dataset



Vehicle Simulator S/W Dataset Collection and Annotation

Integration



Embedded Controllers:

- STM
- CAN
- Display
- OBD
- Nvidia Jetson Processor

Achievements

Data Collection : Bangalore City:

9 TB Data, 10,00,000 Images, 25% Images Annotated and Integrated



Mechanical & Electrical Architecture:

CAED Modelling, FE Analysis, Brake by Wire, EV Simulator Design, Battery Design & Configuration, BMS, Motor & its Controller Integration, Integration of Power Electronics Components.

Design of ECU using Embedded Systems and ROS Integration:

Electronic Control of Speed, Steering and Brake Systems, Design of CAN Bus, Dashboard and OBD Design, Fusion Algorithm for Perception, Localization and Motion Planning!!

Vehicle Simulator & Vehicle Testing :

Desktop Simulation, V2X, Design of Real time Scenarios, Development of vehicle Simulator S/W, Design of Dynamic Vehicle Model. Testing of Vehicle in Autonomous & Remote Control Mode, Obstacle Detection and maneuvering.

Activity & Research Collaboration

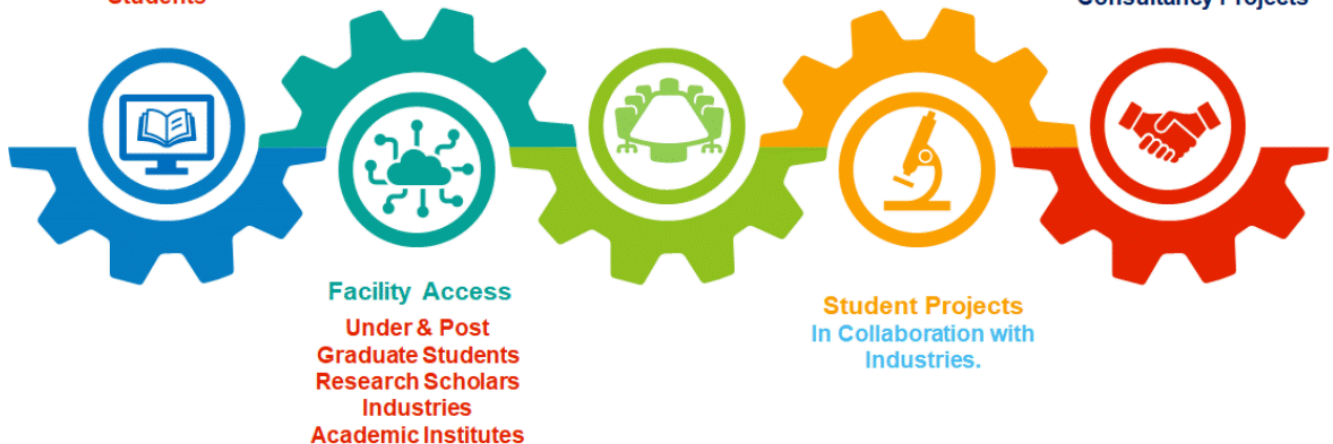
Internships

Diploma, B.E, MTech
Students

Workshops, FDPs & Skill Based Training

Industry Institute Collaboration

Funded Projects, Research,
Consultancy Projects



Facility Access
Under & Post
Graduate Students
Research Scholars
Industries
Academic Institutes

Student Projects
In Collaboration with
Industries.

Contact details

Dr. Uttara Kumari M
Professor, Dept. of ECE
uttarakumari@rvce.edu.in
Ph No: +91-9945336808

Prof. Raja Vidya
Assistant Professor, Dept. of EEE
rajavidya@rvce.edu.in
Ph. No: +91-9008395966

8. E-Mobility

AMPERE
By GREAVES



Center of Excellence in Electric Mobility –COEEM is established with the objective to create a platform for academia and industry to interact, innovate and co-create newer technologies for the EV industry, all in India. The center also aims at nurturing enthusiastic students through the development of futuristic electrical vehicle solutions such as next-generation controllers, battery thermal management systems, embedded design for connected vehicles, and application development for Electric Mobility.

Areas of Expertise

Vehicle Maintenance

- Electric Vehicle service, diagnostics and Maintenance Operations
- Full Breakdown and Benchmark analysis

Thermal Management and Materials

- Magic Materials and Manufacturing Techniques for EV applications
- Thermal Management System for Electric and Hybrid vehicle's



Motor Control

- Electric Motor Selection and Sizing Principles for EV Application
- Motor Control and Power Electronics Technology for Traction Applications

Battery and BMS

- Battery packs and design challenges for Electric and Hybrid vehicle system application
- Battery Management Systems

Charging Infrastructure

- EV Charging Technology and Infrastructure
- Safety, testing Regulations and Standards

Lab & Infrastructure

Hardware and software facilities available in e-Mobility Lab



Two wheelers Assembly unit

Assembling
,Disassembling ,Harnessing
and Maintenance of 2
Wheelers



Hardware Facility

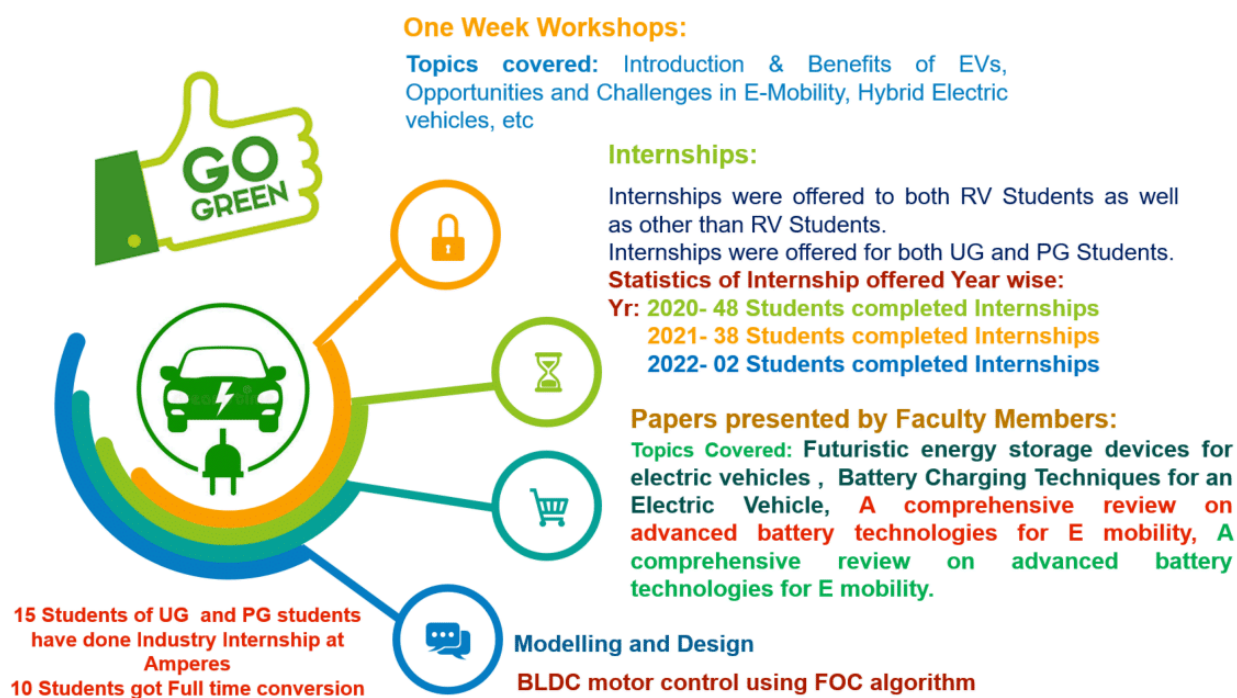
Work station,
ESD benches
Aurdino Controller



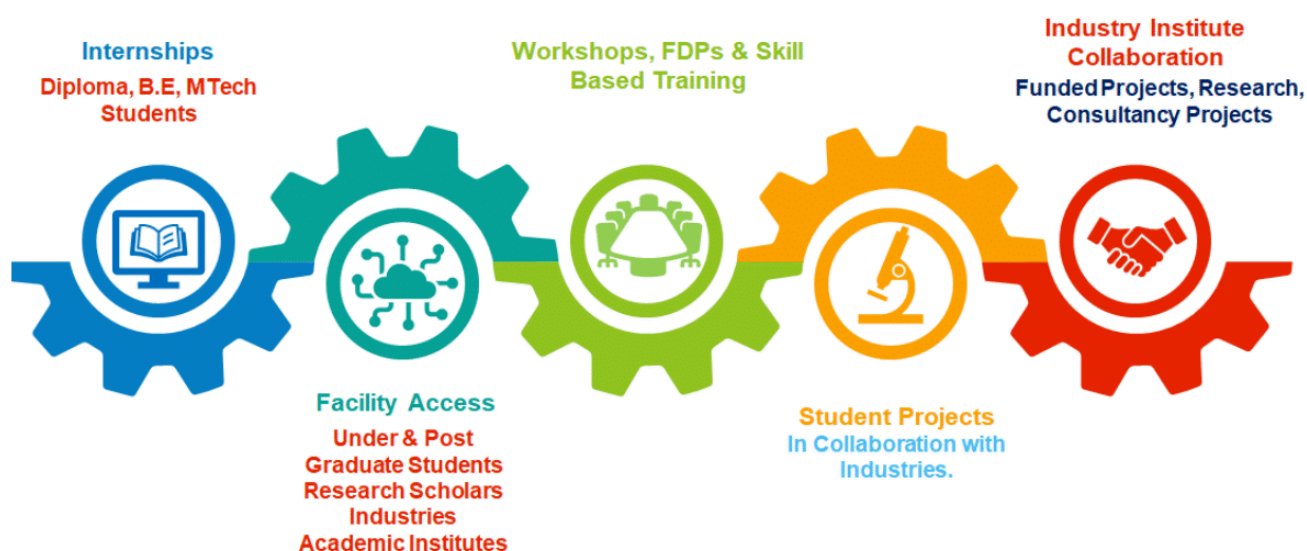
Software available

Ansys software , Altair Embed
software Matlab software , PSIM
software,
Ki Cad Orcad simulation software

Achievements



Activity & Research Collaboration



Contact details

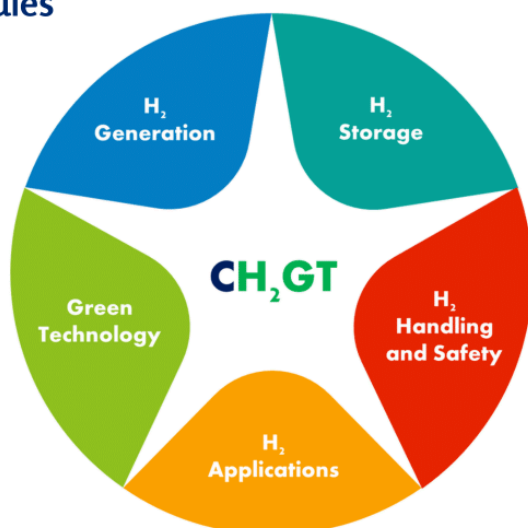
Dr.Dinesh M.N,
 Professor, Dept. of EEE
 dineshmn@rvce.edu.in
 Ph No: +91-9845063663

9. Hydrogen and Green Technology

United Nations has called for immediate action by all the countries. It emphasizes creating an avenue for affordable, reliable, sustainable, and modern energy, to combat climate changes and their impact along with the revitalization of the global partnership for sustainable development. Concurrently, the Government of India has initiated the National Hydrogen Energy Mission (NHEM) with a prime focus on the generation of hydrogen from green power resources and linking India's growing renewable capacity with the hydrogen economy. In line with the initiatives of the United Nations and the Government of India, RV College of Engineering has established the Center for Hydrogen and Green Technology in March 2021.

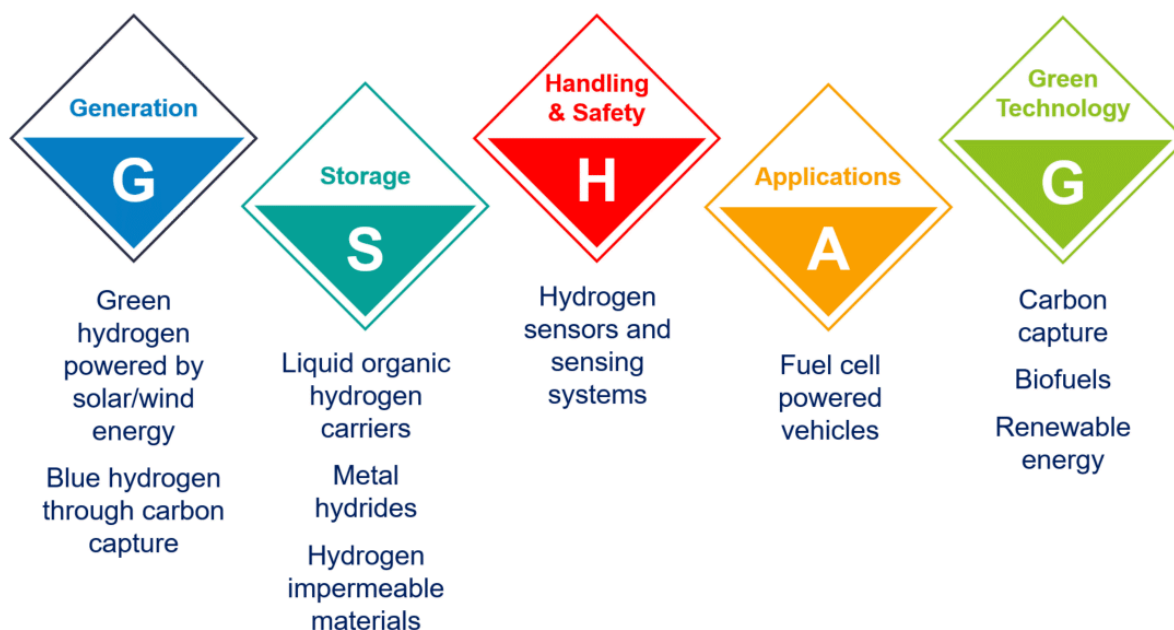
Modules

Accolades

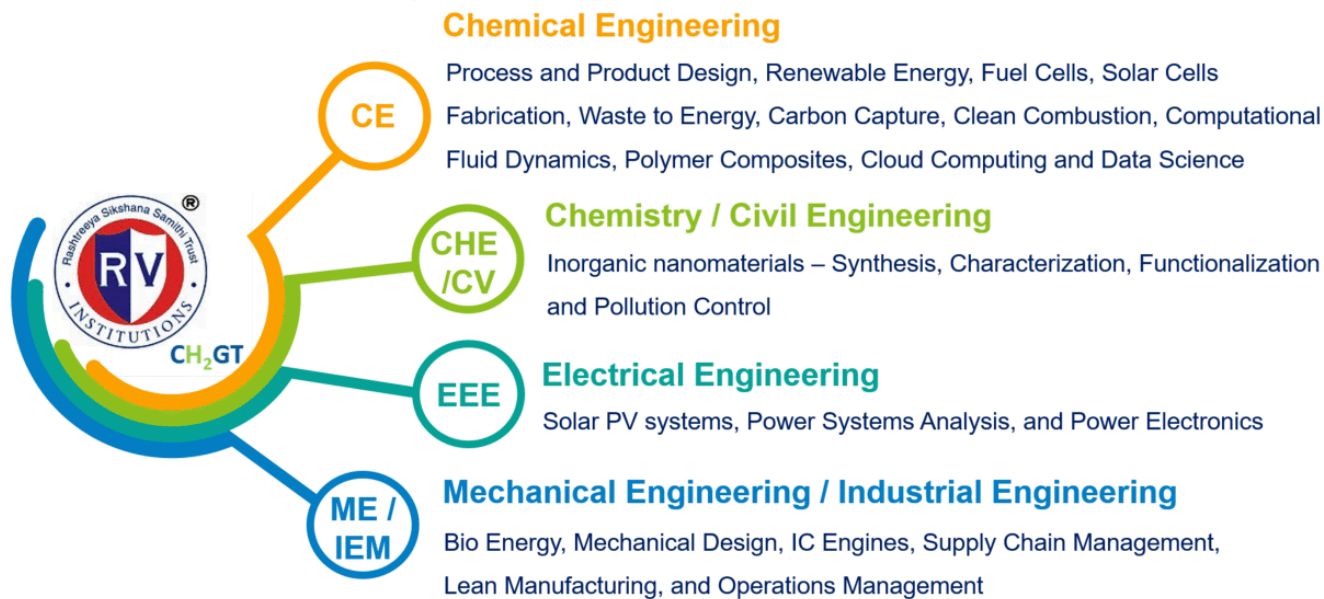


Conference Proceedings	25
Students Trained	99
SCI Publications	06
Patents	04
Funded Projects	01
Students Projects	10
MoUs with Organizations	04

Focus



Team and Expertise



Support



Karnataka Renewable Energy Development Limited
Government of Karnataka



Anvita Electronics

Nichrome Testing Laboratory and Research Pvt. Ltd.



CONSULTING / TESTING / TRAINING / ENGINEERING



ipgi instruments
Technical Support for all

Activities



Contact details

Ujwal Shreenag Meda, PDEng, PhD
Assistant Professor, Department of Chemical Engineering
ujwalshreenagm@rvce.edu.in
Ph No: +91-8050842363



10. CCTV Research

Research to Reality

An Integrated research facility to bridge the gap in knowledge, practice, protocols, testing, experiments, training, certification and expertise in video surveillance with various industry partners providing a true multi-stakeholder research facility. The Center for CCTV Research has been created with the intention of being the catalyst to bridge the wide gap between the industry and creation & execution of humongous CCTV projects in the country.

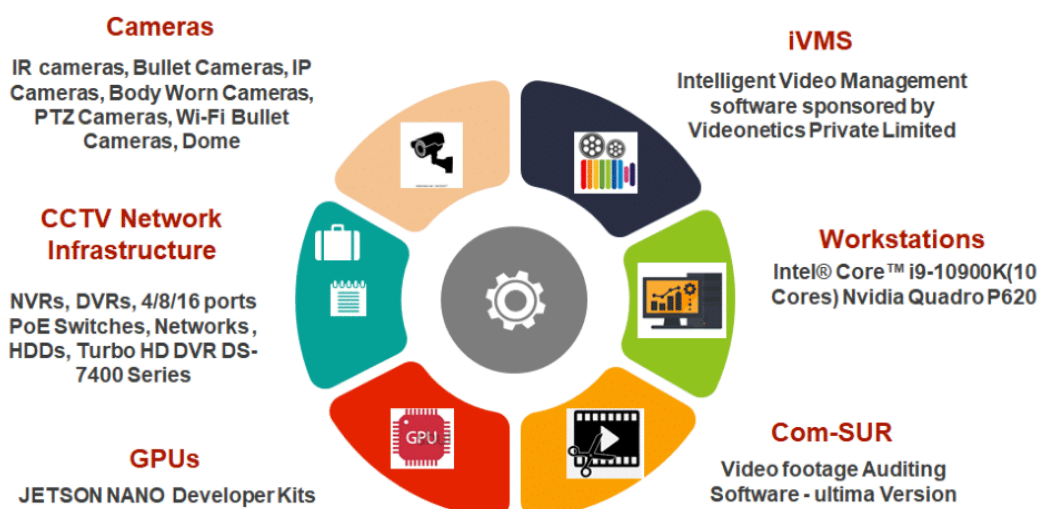
Areas of Expertise



- | | | |
|---|---|-------------------------------------|
| 1 | One stop shop for all the video based Solutions | Video Analytics |
| 2 | Automatic Auditing of CCTV footages hourly/daily/monthly for Video Summary | Video footage Auditing |
| 3 | Criminal Investigation of Multimedia data with advanced digital forensics | Computer Forensics |
| 4 | Intelligent Video Management | Intelligent Video Management |
| 5 | Artificial Intelligence and Machine Learning Based real time use cases through high performance computing | Visual Surveillance based solutions |

Facility & Infrastructure

The Center would be the synthesis and the coordination center for all major CCTV players in the country and beyond. The creation and operations of this Center would be a clear manifestation of this dream.



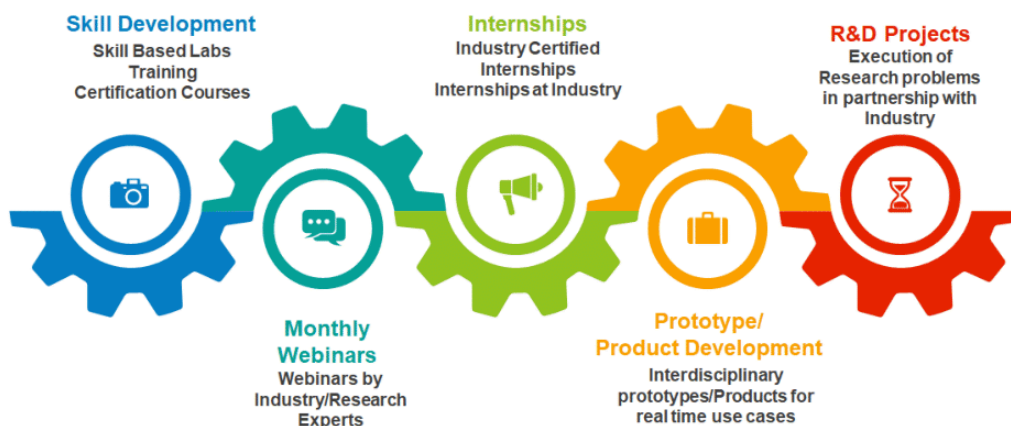
Milestones



Industry Partners



Activity & Research Collaboration



Team

Dr. Ramakanth Kumar P - HoD-CSE, RVCE, Head-CCCTVR
 Dr. Sreelakshmi K - HoD-ETE, RVCE, Head Operations- CCCTVR
 Shri. Sanjay Sahay, Director- TechConPro, Founder & Mentor - CCCTVR
 Shri. T Shankar Head - Research and Projects
 Shri. Gautam Goradia, CEO & MD-Hayagriva Software Private Limited, Mumbai
 Dr. Surbhi Mathur, Senior Asst Prof. National Forensic Sciences University, Gujarat
 Dr. Hemavathy R, Assoc Prof, CSE RVCE
 Prof. Poornima Kulkarni, Asst Prof. ISE, RVCE
 Prof. Nagaraj Bhat, Asst Prof. ECE, RVCE
 Prof. Neethu S, Asst Prof. ETE, RVCE

For more details contact..

Dr. Azra Nasreen, Assoc. Prof, Dept of CSE

✉ ccctvresearch@gmail.co, Ph No: +91-9886923829

11. Logistics & Supply Chain Management

The Centre of Excellence in Logistics & Supply Chain Management at RVCE is dedicated to carrying out specialized theoretical and applied research on Supply Chain and Logistics Management. The vision of the center is to be an internationally recognized Centre for supply chain and logistics management dedicated to the creation and dissemination of new knowledge and a forum for networking with various industries, educational centers and other related entities.

Areas of Expertise



Facility & Infrastructure

The center is well equipped with trained faculty, computational infrastructure and softwares both open source and commercial



Milestones

Training students and researchers in Digital Supply chain and logistics management



Activity & Research Collaboration

Joint Certification courses on Supply chain and Digital Supply chain (Duration - 3 months & 6 months) and Internships

Collaborative paper publications

Research on specific issues faced by companies by RVCE Faculty and students through project work



Applying for Joint research projects for various funding agencies

Specialized Executive Development Programs on SCM

Industry Partners



Contact details

Dr. C K Nagendra Guptha
Professor and Head, Dept. of IEM
nagendragupta@rvce.edu.in
Ph No: +91-9449612962



12. Visual Computing

The Center of Excellence in Visual Computing provides computing facilities for students, research scholars, and faculty members. The objective of the center is to bring the students and faculty of various disciplines together to execute interdisciplinary projects. The center facilitates the execution of computationally intensive research work in various state-of-the-art domains including Edge Computing, Parallel Programming, Artificial Intelligence, and Machine Learning. The center offers internships, and training and facilitates skill enhancement in the areas like image/video analytics, Mobile Application Development, Internet of Things, Natural Language Processing.

Areas of Expertise

Food, Nutrition, Environment and Agriculture

- Functional foods
- Nutraceutical
- Integrated water filtration system
- Precision agriculture
- Crop Monitoring

Machining and Novel view synthesis

- Tool Monitoring
- Tool Wear



Medical Imaging and Dentistry

- Radiology
- CBCT Imaging
- Cancer detection and Recommendation

Remote Sensing and Geo informatics

- Satellite imagery Analysis
- Spectral and Spatial resolution
- Geoinformatics
- EMR Analysis
- Spatial Analysis

Facility & Infrastructure

The centre facilitates students with required infrastructure to execute vision-based applications. The available infrastructure of the centre includes high end workstations integrated with GPU cards to execute computationally intensive tasks and model deployment devices like Jetson kits.



- Quadro RTX A6000
- Quadro RTX 8000
- Titan X Pascal

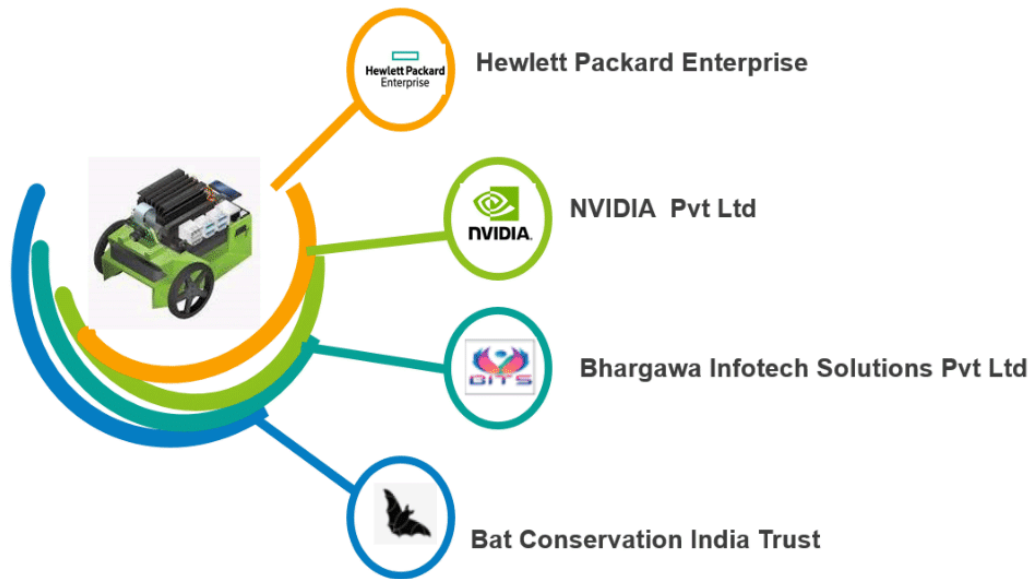


- Jetson nano 2GB
- Jetson Nano 4GB
- Jetson Tx2, Rpi



- HPI RCTO Z2 tower
- HP core i9, 12900

Research Collaborators and Sponsors



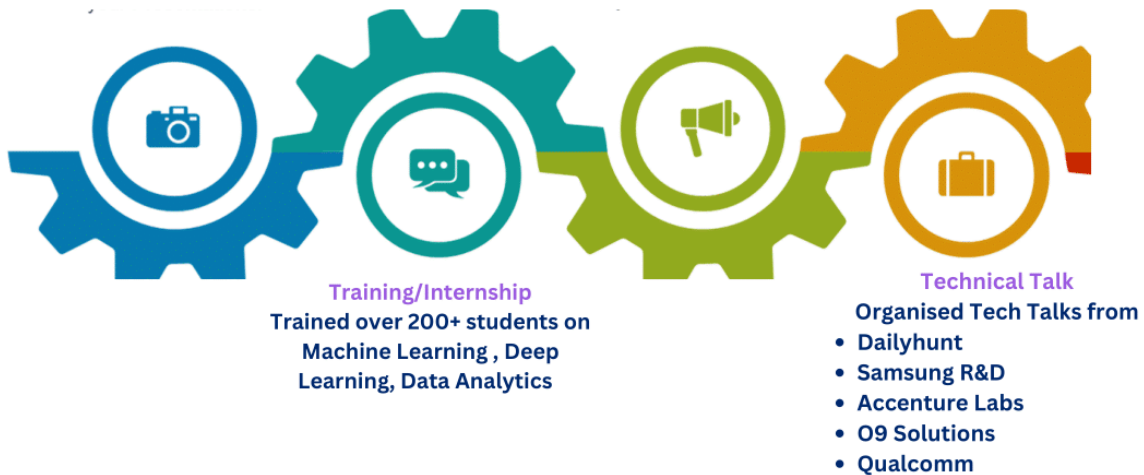
Activity & Research Collaboration

Consultancy

- An Intelligent framework to detect child abuse using deep learning
- Map a bat roost app development
- BatEYE :An acoustic signal detecting and monitoring device for bat habitat
- Network Architecture Comparison Tool

Student Projects

- Water Quality Assessment
- Acoustic Signal Monitoring
- Object Detection in Satellite Images



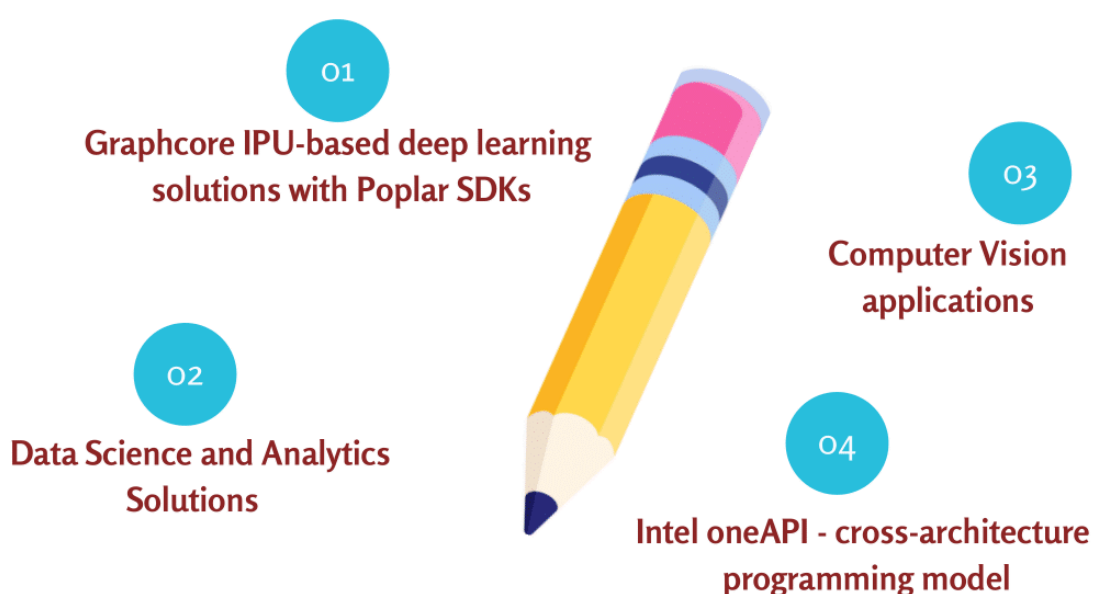
Contact details

Dr. Anala M R
Professor, Dept. of ISE
analamr@rvce.edu.in
Ph No: 8618687573

13. AI Research and Business Solution

The COE is created jointly by RV College of Engineering and Boston Ltd. UK to cater to the application of Artificial Intelligence, Machine learning, and Deep Learning in the research and development of business solutions. The COE also provides the necessary infrastructure for start-ups & technology enabled training to encourage and support start-up ecosystems

Areas of Expertise



Facility and Infrastructure

01

The COE has a Graphcore IPU M2000 machine with POD4 capacity to handle high-end AI workloads without dependency on the cloud infrastructure. Clients can process their data locally and build and run AI, ML, and DL models.

02

The COE also offers curated training programs on the latest and cutting-edge technologies, like Intel One API, for Industry participants and students.

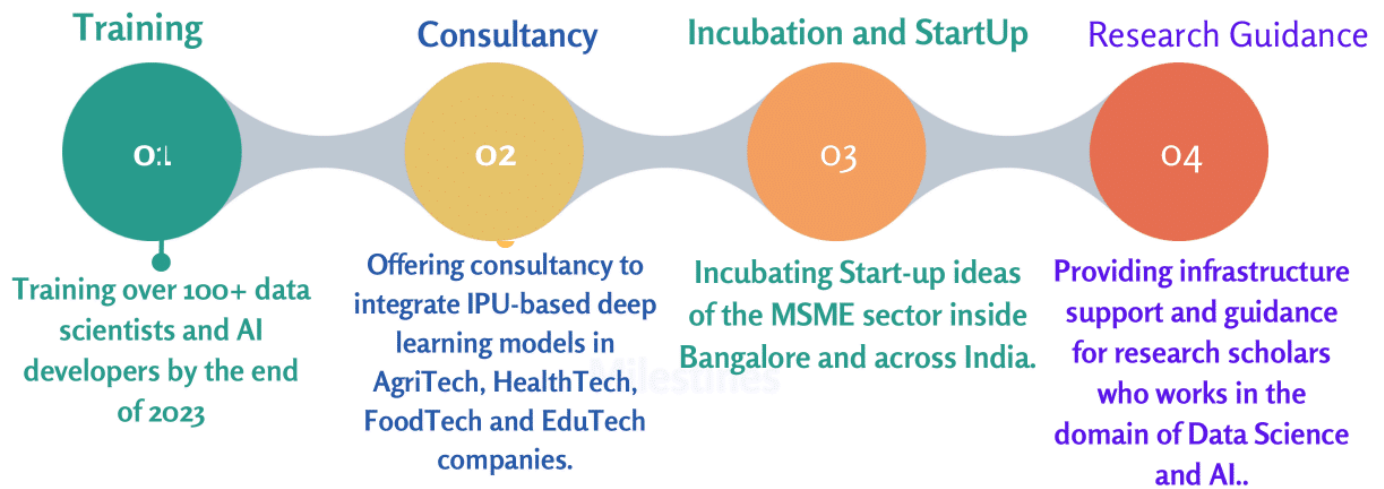
03

The COE also supports incubating ideas under industrial mentorship and gives bootstrapping services to launch the ideas as workable products and business services.

04

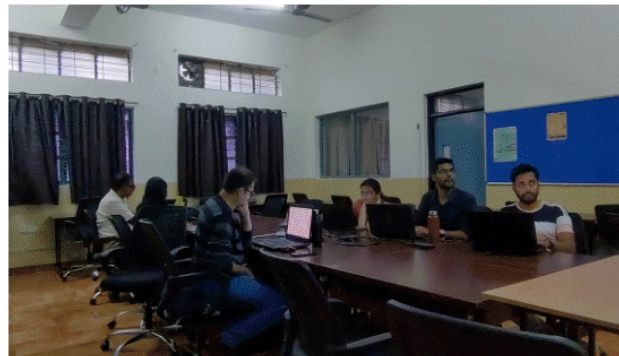
The COE invites industrial consultancy inquiries in verticals such as commerce, science, healthcare, smart cities, agriculture, and others, where data science and AI technologies are needed.

Achievements



Activity and Research Collaboration

- O1** Successfully launched the first batch of the certification course in data science on 20/08/2022. Number of Participants: 10 (05 Industry + 05 Academics).
- O2** Train-the-trainer workshop on Intel Unnati Gaudi DL Lab



Contact details

Dr. B. Sathish Babu
Professor and Head, Dept. of AIML
bsbabu@rvce.edu.in
Ph No: +91-9844488329

14. Women in Cloud CoE in India

Women in Cloud Center of Excellence in India at RV College of Engineering® in association with Women in Cloud (WIC), USA would like to extend the benefits of the CoE to the beneficiaries across Karnataka state. The objectives are in line with Engineering (R & D) policy 2021 and include innovation lab programs to encourage open innovation, boost the Engineering R&D ecosystem, and recruitment assistance. WIC is a community-led economic development organization taking action to generate \$1B in net new global economic access for women entrepreneurs by 2030 through partnerships with corporations, community leaders, and policymakers.

Areas of Expertise



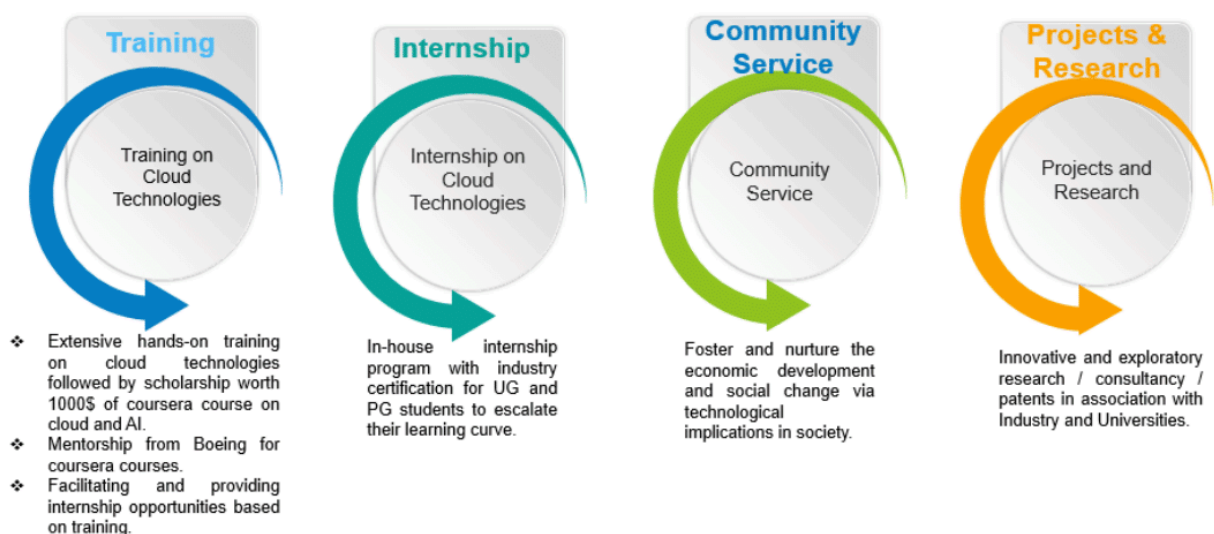
Industry & Community partners



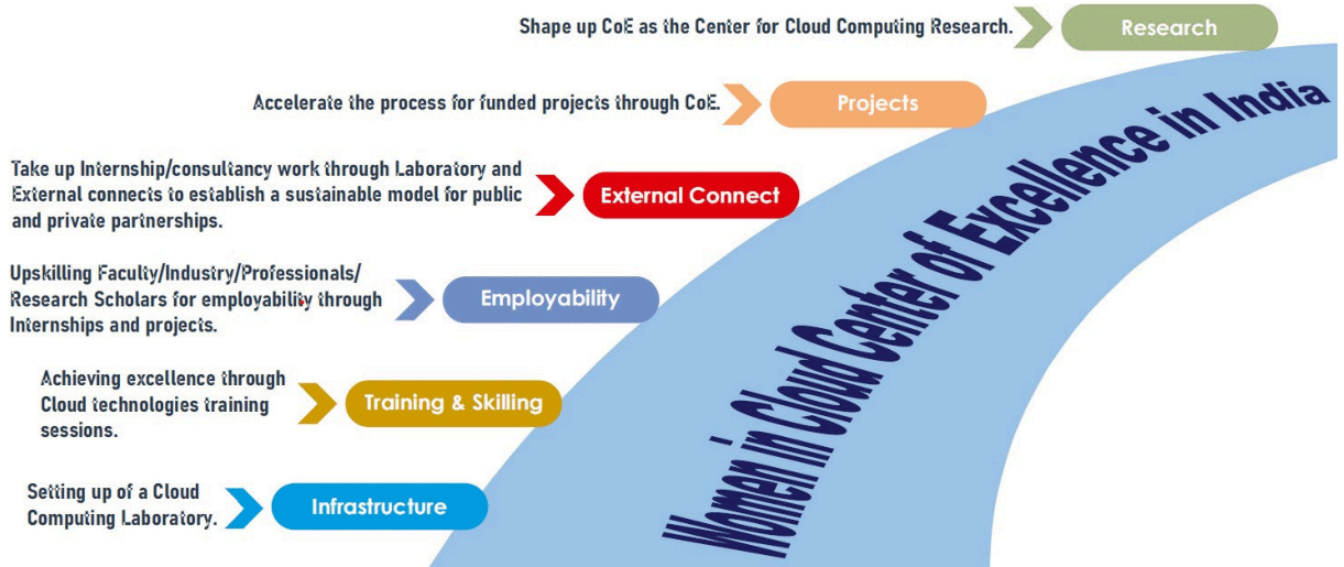
Facility & Infrastructure

Software Resources: Microsoft Azure, IBM Cloud, ThingSpeak, ELK Cloud, Google Data Studio, Docker, Python Flask, MongoDB, GitHub, Atom IDE.

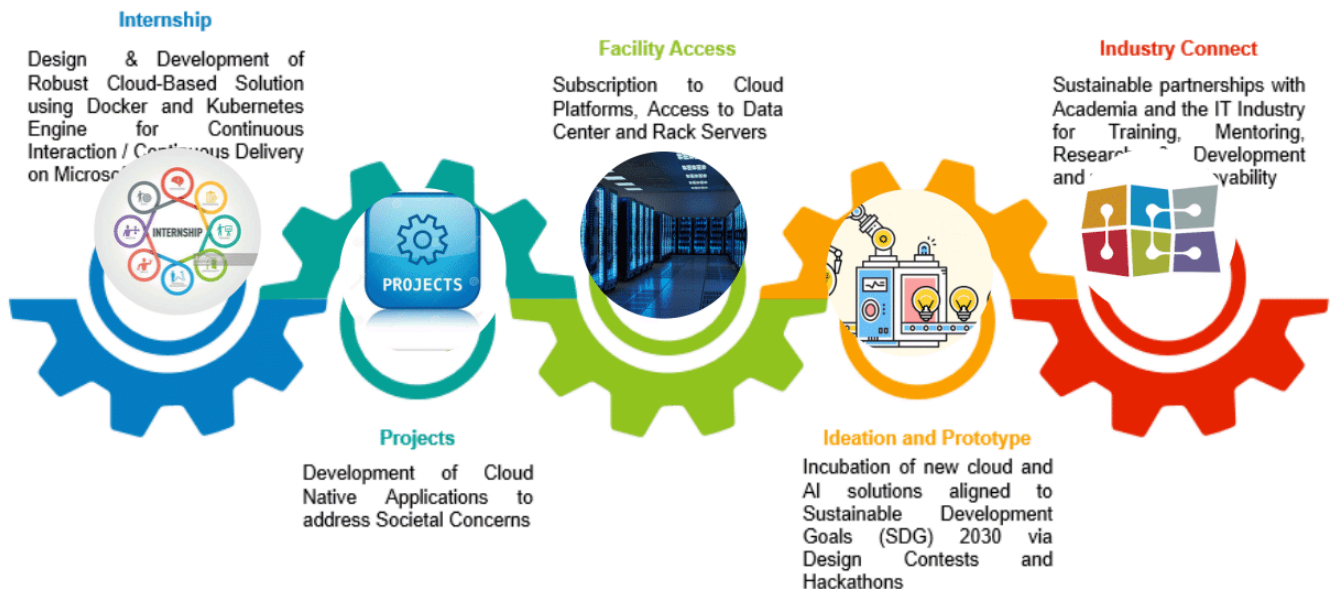
Hardware Resources: Data Center Rack Server.



Roadmap



Activity & Research Collaboration



Contact details

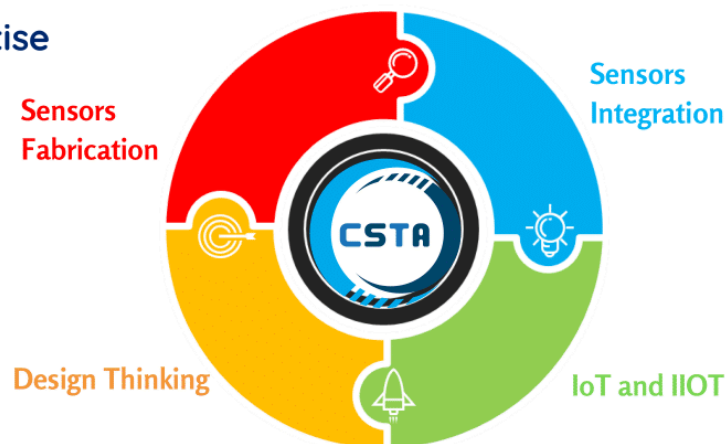
Dr. Mamatha G S
Professor, Dept. of ISE
mamathags@rvce.edu.in
Ph No:+91-9886311120

Dr. B M Sagar
Professor & HoD, Dept. of ISE
hodise@rvce.edu.in
Ph No:+91-9886332226

15. Sensor Technology and Applications

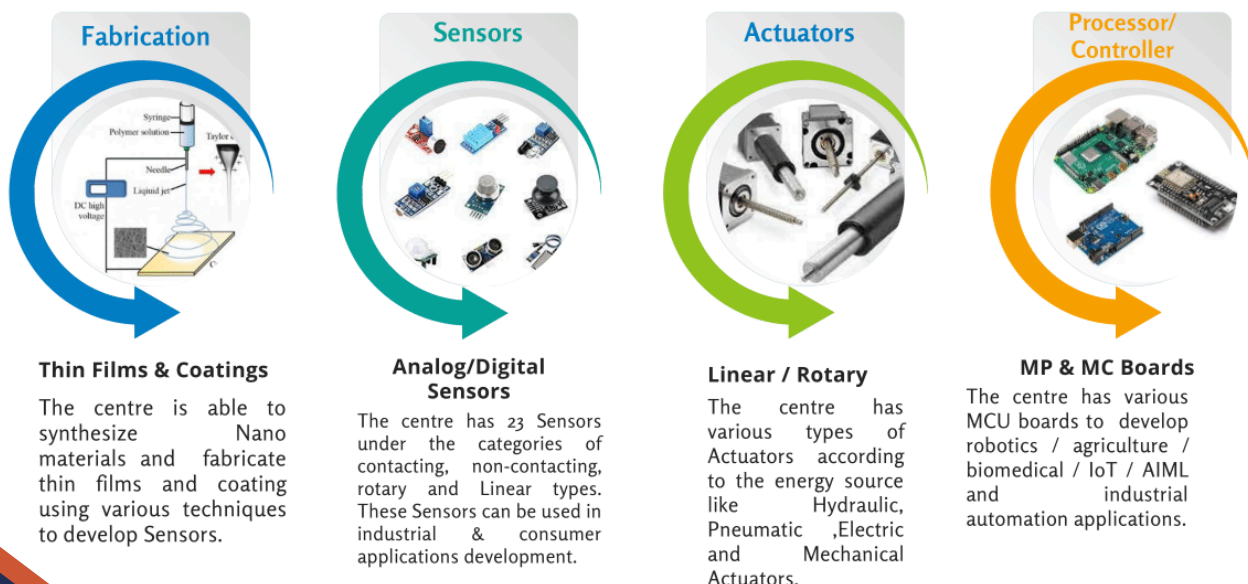
The Center for Sensor Technology and Applications (CSTA) is established in September 2022 to support academic and research programs in sensor fabrication and their integration. The center has established a strong collaboration with experts from academia, research organizations, and industries related to the domain. The CSTA was launched to suffice the need for sensors and automation in robotics, agriculture, biomedical, IoT, AI, and ML. The center has the state of the art facilities for sensor fabrication and characterization for various applications using appropriate processor/controller modules. CSTA center also supports the execution of R&D projects related to sensors, funded by various government funding agencies and industrial consultancy. In addition to research, the center also conducts national/international conferences, workshops, seminars, and Internship programs.

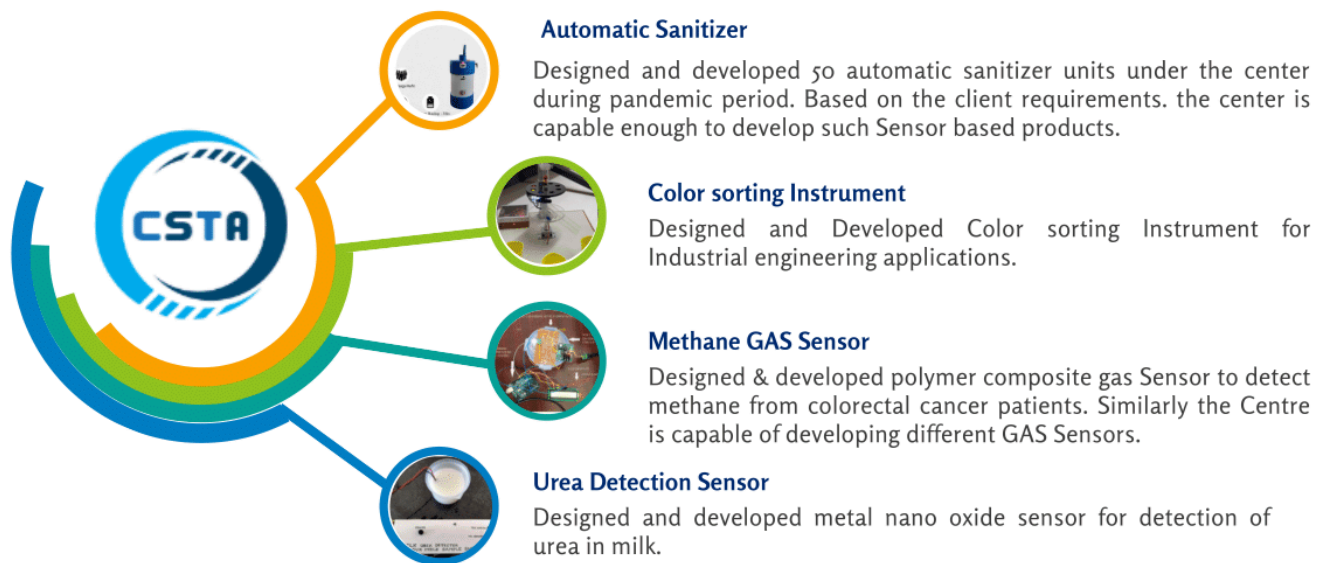
Areas of Expertise



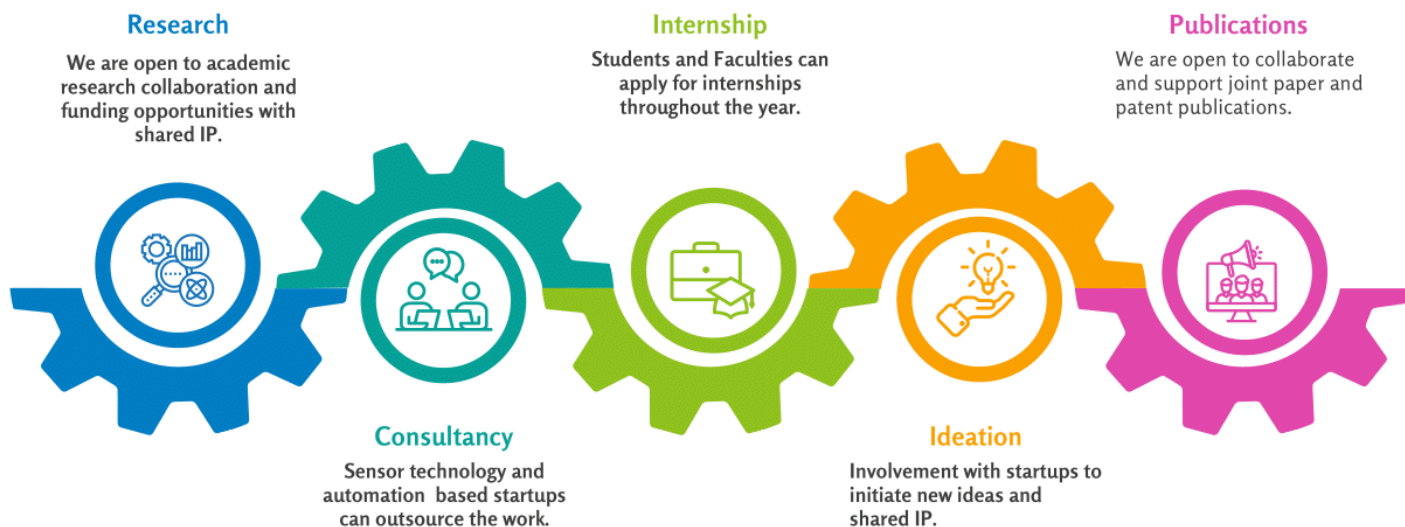
Facility & Infrastructure

The center is well-equipped with the infrastructure necessary for sensor fabrication and its integration with processors/controllers to meet the industry standards.





Activity & Research Collaboration



Contact details

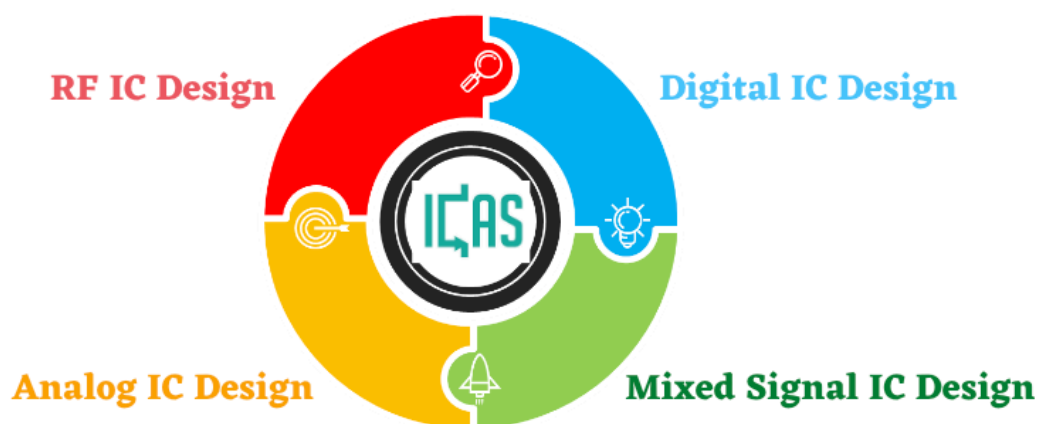
Dr.Kendaganna Swamy S
 Assistant Professor, Dept. of EIE
kendagannaswamys@rvce.edu.in
 Ph No:+91-9980672756

16. Integrated Circuits and Systems



The CoE consists of a group of passionate students and teachers from RVCE creating an eco-system that inspires the VLSI/Electronics system designer, nurturing their skills and innovative ideas, promoting sustainable and interdisciplinary research, with inclusive societal concerns. The CoE promotes a coherent programme of training which will enhance the skill set of young designers in the specified areas with academia - industry collaboration in India and abroad. It aims at engaging enthusiastic students in designing/developing activities by carrying out funded projects and consultancy works for various organisations and thereby partake in the growth of the nation.

AREAS OF EXPERTISE



OUR ACTIVITIES



ACTIVITY AND RESEARCH COLLABORATION

RESEARCH

Open to academic research collaboration and funding opportunities

INTERNSHIP

Internship opportunities throughout the year for students and faculties

TRAIN THE TRAINER PROGRAMMES



CONSULTANCY

IC design consultancy projects with various industries

IDEATION

Involvement with industry to initiate new ideas



CONTACT DETAILS

Dr. Shylashree N
Associate Professor,
Department of ECE, RVCE
9611109269
shylashreen@rvce.edu.in

Dr. Geetha KS
Vice Principal, RVCE,
9900700990
viceprincipal@rvce.edu.in

17. Education and Digital Learning Research

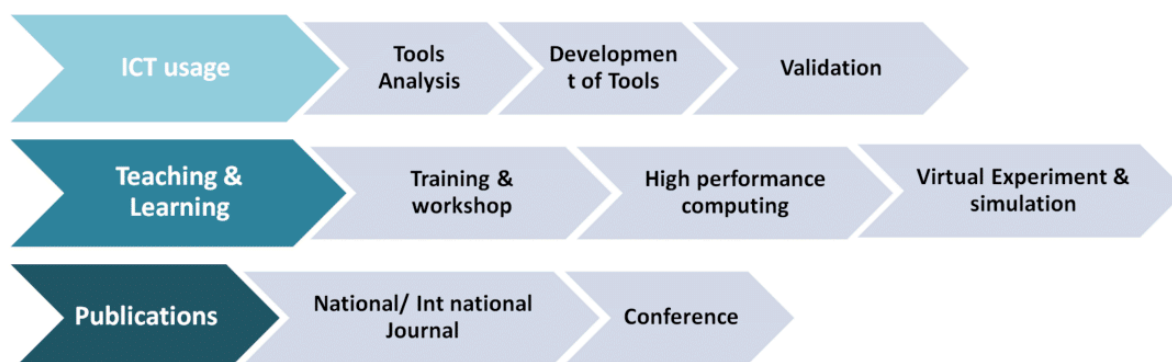
CEDLR is a lab dedicated to providing excellence in education to enhance teaching and learning for holistic growth. The CoE works with the vision of *“Transformation of education and learning through the adoption of digital initiatives to enhance learnability and research in engineering education”*

Facility & Infrastructure

- The center is well equipped with trained faculty, computational infrastructure and necessary teaching learning softwares both open source and commercial
- The Center conducts training and workshops for faculty on ICT usage, the teaching-learning process and accreditation



Activity & Research Collaboration



Contact details

Dr. B V Uma
Professor & Dean-Student Affairs
umabv@rvce.edu.in
Ph No:+91-9845593646



RV College of
Engineering®

Mysore Road, RV Vidyaniketan Post,
Bengaluru - 560059, Karnataka, India | +91-80-68188110 | www.rvce.edu.in

Go, change the world®



Scan Here