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Technological
University, Belagavi

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**Department of Electronics & Instrumentation
Engineering**

“AUTOMATION EXPLORER” NEWSLETTER

Vol 6, Issue-2, 2020

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RV College of Engineering (RVCE) established in 1963 is one of the earliest self-financing engineering colleges 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 12 Bachelor, 19 Master Programs and all the departments have research centre's, affiliated to Visvesvaraya Technological University (VTU) Belagavi. The institution has set itself a Vision “Leadership in Quality Technical Education, Interdisciplinary Research & Innovation, With a Focus on Sustainable and Inclusive Technology”. Recent awards and achievements includes “Engineering College of the Year-2015” by the Higher Education Review Magazine, Certified as 'Global League Institute' by Great Place to Study Research Institute (GPSRI), Ranked 63rd in the Country by National Institutional Ranking Framework (NIRF- 2019). The institution got autonomous status from UGC upto 2023-24. The college has 15 research centres recognized by the VTU. The institution has projects funded by organizations such as DST, UGC, CSIR, AICTE, ISRO and many more. The institution has been accredited by NAAC. All the UG programs and eligible PG programs have been accredited multiple times by NBA. About 250 Research Scholars are pursuing Ph.D. College has 6 Centres of Excellence and an incubation Centre.

Message from Editor's Desk:

Welcome to this issue of Newsletter from the Department of Electronics and Instrumentation Engineering. We are delighted to launch our Bi-Annual Newsletter “**AUTOMATION EXPLORER**”. This newsletter is a digital way for us to communicate with our students, faculty members, alumni and industrial partners. This newsletter will provide a glimpse of the departmental activities and achievements. Also, it enlightens the readers about the latest happenings in the department, focusing about different activities like placement, ISA, institutional club activities, student and faculty achievements. We look forward for more activities and achievements for the department to march towards excellence in the future. We would like to thank all teaching, supporting staff and our beloved students for their constant support.

Editorial Committee: *Mrs. Tabitha Janumala, Assistant Professor, Editor*

Mrs. Chandrakala M R, Programmer G-II

Dr. CH. Renu Madhavi, HoD

Message from HoD's Desk

The Instrumentation Technology Department was established in the year 1981 with an intake of 40 students and the current intake is 60 students. The Instrumentation Technology was later nomenclated as "Electronics and Instrumentation Engineering" in the year 2014. The department also runs a Post-Graduate programme in Biomedical Signal Processing and Instrumentation and an established Research Centre in 2011, affiliated to VTU Belagavi. The syllabi of the courses are contemporary and constantly updated as per industry needs and the laboratories are modernized to reflect the latest changes in technology. It offers high quality research as part of its Ph.D programs. The department has been accredited multiple times by NBA, New Delhi, the latest being in 2017 for UG and in 2014 for PG. The department has to its credit sanctioned projects and programs, sponsored by various agencies and organizations. The department aims to produce engineering graduates with adequate theoretical and practical knowledge in the area of electronics as well as instrumentation and computers so as to make them capable of design, implementation, development and maintenance of advanced instrumentation systems. Instrumentation engineering is a specialized branch of electronics, computers and electrical engineering, primarily focusing on the principles and operations of measuring instruments used in the design, implementation, configuration, and development of automated systems. Electronics and instrumentation engineers carry out the task of measuring, testing, installing, designing, and maintaining various instruments used in the industry, hospital and other sectors of the society as well as carrying research in domain areas. The aim of instrumentation engineers is, "To measure the world accurately and to control it precisely". The program curriculum is suitably designed to meet the challenges of global technology. The department has well qualified and experienced faculty members with research experience in allied domains and well equipped laboratories. The implementation of outcome based education in the program enhances the knowledge of faculties and students to meet the challenges of new technological world so as to mould the graduates as successful professional engineers, researchers and entrepreneurs. The curriculum of this program is good enough for employment in industry, government, academia, research and management positions. At the outset, I congratulate the newsletter committee members for their efforts in bringing out the newsletter. Newsletter is an amalgamation of all the events held in the department and it plays a pivotal role in showcasing the achievements accomplished by the faculty and the students.



Dr. C H Renumadhavi

1. Department Vision, Mission, PEOs and PSOs.

Vision

Achieving academic excellence in Instrumentation Technology by adopting interdisciplinary research with a focus on sustainable and inclusive technologies.

Mission

1. To create an environment for students to excel in domain areas and get motivated to involve in interdisciplinary research by utilizing state of the art infrastructure.
2. To impart technical knowledge, encourage experiential learning and develop future professional leaders.
3. To establish industry-academia networking and develop industry-ready students and future entrepreneurs, to meet societal & industrial challenges.
4. To motivate lifelong learning and research in sustainable technologies to find improved solutions for the betterment of society.

Program Educational Objectives (PEOs) of the Department

1. Apply Instrumentation, Electronics, Controls and Automation concepts to develop technical solutions for industrial problems.
2. Exhibit competency in adapting to various industrial challenges and work in inter-disciplinary projects with team spirit and professional ethics for achieving organizational goals.
3. Pursue higher education in technology or management and achieve professional excellence by imbibing leadership qualities and communication skills.
4. Become entrepreneurs with a focus on sustainable technologies and develop innovative solutions to meet industrial and societal needs.

Program Specific Outcome (PSOs) of the Department

PSO1: Design, analyse and practice the instrumentation, controls and automation concepts and techniques required for industrial and/or research pursuits resulting in product development, publications or patents.

PSO2: Demonstrate the knowledge of basic science, mathematics, electronic system design and programming for real-time applications, towards developing industrial solutions and become technology leaders of future.

2. M.Tech in Biomedical Signal Processing & Instrumentation

The department of Electronics and Instrumentation Engineering started PG program (M.Tech in Bio Medical Signal Processing and Instrumentation) with an intake of 18 students in the year 2005

affiliated to VTU, Belagavi and reached autonomous status in the year 2016. The PG program has one Professor, Two Associate professors and one Assistant Professor.

Program Educational Objectives (PEOs)

PEO1: Apply basic Physiological concepts and provide technical solutions for medical problems.

PEO2: Exhibit competency for achieving excellence in Industry, Academics, R&D organizations, Entrepreneurial pursuit and consulting firms.

PEO3: Demonstration and develop sustainable biomedical engineering skills for betterment of society and ethics.

PEO4: Exhibit leadership qualities and engage in life-long learning through independent study and research.

Program Specific Outcomes (PSO)

PSO1: Design and analyse basic and advanced biomedical appliances required for medical domain and research pursuits.

PSO2: Apply the concepts of signal and image processing techniques to address the problems in Healthcare.

3. Departmental Activities from JULY 2020 to DECEMBER 2020

The department always endeavoured to contribute significantly to the growth of technical education. The department has organized several workshops, seminars and guest lecturer for the benefit of faculty, students and research scholars of educational institutions in and around the region.

a. Faculty development Program/training activities/ STTPs

Table 1: Faculty development Program/training activities/ STTPs

Sl.No	Name of Faculty	Faculty development/training activities/ STTPs	Date
1.	Prof. Rajasree P M	ATAL FDP on “Precision Health Technology”	14 th to 18 th December 2020
2.	Prof. Veena Divya K		
3	Prof. Rajasree P M	Deep Learning Using Medical Data Organized by Finland Labs online	16 th to 20 th November 2020
4	Prof. Veena Divya K		
5	Dr.CH. Renu Madhavi	AICTE-ATAL FDP on Blended Learning and Flipped Class room	14 th to 18 th September 2020
6	Dr. Anand Jatti	Design of Knowledge based systems using artificial Intelligence and Machine Learning Models: In the context of Agricultural and Food Products AICTE (online)	7 th to 12 th September 2020
7	Dr. Deepashree Devaraj	One week online Short Term Training Programme (STTP) on “IoT for Healthcare”.	24 th to 28 th August 2020

8	Dr. Padmaja KV	Blended Learning and flipped classroom ATAL Academy sponsored online ATAL FDP, AICTE	10 th to 14 th August, 2020
9	Dr. Rachana S Akki	Simulation and Modelling of Thin Films Using COMSOL Multiphysics	3 th to 7 th August 2020
10	Prof. Veena Divya K	Online Faculty Development Program- "Moodle & its Features for Teaching – Learning and Evaluation Process"	27 th to 31 st July 2020
11	Prof. Rajasree.P.M		27 th to 31 st July 2020
12	Dr. Deepashree Devaraj	one week online Short Term Training Programme (STTP) on "IoT for Healthcare, Dr.Mahalingam college of Engineering and Technology, Pollachi, Tamilnadu	24 th to 29 th August 2020

b. Workshops / Seminars / Conference / FDP Events Organized:

SL No	Name of the co ordinators	Event organised	Date
1	Prof. Harsha Dr. Rachana S Akki	Workshop: Modulation & IoT Applications using LabVIEW	6 th to 10 th July 2020
2	Dr. Sandesh R S	FDP: along with Dept of ME,RVCE Advances in Automotive Mechatronics	27 th to 31 st -July 2020

c. Invited talks delivered by faculty:

Sl No	Faculty Name	Topic	Venue	Date	No of participants
1	Dr. Kendagannaswamy S	ICT Tools for Teaching Learning Process	RVCE	06 th July 2020	100
2	Dr. Padmaja KV	Selection of Sensor, Sensor Specification and Signal Conditioning” as part of Internship for Embedded systems for IOT	CISCO-RVCE COE	07 th August 2020	51

d. Workshop / Seminar /Webinars/ Conference attended by Faculty:

Sl No	Faculty Name	Conference /Workshop /Webinar	Venue	Date Attended
1	Dr. Padmaja KV	Workshop Modulation & IoT Applications using Lab	RVCE Dept. of EIE	6-07-2020 to 10-07-2020
2	Dr. K B Ramesh			
3	Dr Sandesh R S			

4	Dr. Rachana S Akki	VIEW”		
5	Prof. Harsha			
6	Dr. Padmaja KV	Webinar: Brain Computer Interface and its Applications	RVCE Dept. of ISE	07.07.2020
7	Dr. Padmaja KV	Webinar : Happiness Quotient	Online organized by BCIC	21.07.2020
8	Prof. Veena Divya K Prof. Rajashree P M Dr. Deepashree Devaraj	Conference : Attended the 42 nd Annual International Conference of the IEEE Engineering in Medicine and Biology Society via the EMBS Virtual Academy	Online EMBS & IEEE	20.07.2020 to 24.07.2020
9	Dr. Padmaja KV	Webinar : Attended 4 th edition of TED ^x a virtual event.	RVCE	09.08.2020
10	Dr. Prasanna Kumar S C	Webinar: Online Teaching Course	IUCEE	14 Class (4 days in a week of August 2020
11	Dr. Anand Jatti	Workshop: Design of Knowledge based systems using artificial Intelligence and Machine Learning Models: In the context of Agricultural and Food Products	AICTE (online)	07/09/2020 to 12/09/2020
12	Prof. Veena Divya K	Workshop: Matlab Master Class 2020	IETE Mumbai (Online)	30 days September 2020
13	Prof. Tabita Janumala	Webinar: MATLAB Onramp training course conducted by MathWorks	online	17/10/2020
14	Dr. Padmaja K V	Workshop: Attended online five day workshop on Universal Human Value on the theme “Inculcating Universal Human Values in Technical Education”	conducted by AICTE online	02-11-2020 to 06-11-2020
15	Prof. Tabitha Janumala	Webinar: Machine Learning Onramp	online	09-11-2020
16	Prof. Veena Divya K and Prof. Rajasree P M	Webinar: Deep Learning Using Medical Data	Organized by Finland Labs online	16-11-2020 to 20-11-2020

5. *Patent Filed*

SI No	Title	Author	Patent Filed on	Status
1	Prof. Veena Divya K Dr. Anand Jatti	System and Method of a Hybrid Control Model for Power Quality Improvement of Wind Energy Conversion System with Unified Power Quality Controller	19 th July 2020	Filed

6. *Publication details of faculty and students.*

1. G. Chethana, and K.V. Padmaja, “Integer Matrix Keys for Secure Data Aggregation in Clustered Wireless Sensor Networks”, *Intl Journal Of Electronics And Telecommunications, OCT-2020*, Vol. 66, No. 4.
2. Veena Divya K, Devanshu Mukherjee, Vidhya Shree, Somali Roy, Venkat Raghavan, Rajasree P M, Deepashree Devaraj, C H Renumadhavi, Vasanth Raj Lakshman, K N Subramanya, “A Novel Approach towards Early Detection of Obliteration in Lumbar Lordosis”, *Annu Int Conf IEEE Eng Med Biol Soc. Jul;2020*, Pubmed Journal.
3. Tabitha Janumala and Dr K B Ramesh, “Development of an Algorithm for Vertebrate Identification using speeded up Robost Features (SURF) Technique in Scoliosis X-Ray Images”, *International conference on image processing and capsule networks, July,2020*, pp54-62.

7. *Any other Information*

- **Dr. Padmaja K.V, Professor and Associate Dean**, Organized second Doctoral committee meeting of my Research scholar, Mrs Chetana for monitoring the progress of P.hD work from ECE research centre on 16.07.2020.
- **Dr. Padmaja K.V, Professor and Associate Dean**, Invited as subject expert for BoS at E & IE Dept, Dr. A.I.T Bengaluru to design the curriculum of Electronics and Instrumentation Engineering (2019-20, 2018-19, 2017 – 18 Batches) Program on 14-08-2020.
- **Dr. Padmaja K.V, Professor and Associate Dean**, Organized Doctoral committee meeting of my Research scholar, Mr. Harsha for monitoring the progress of P.hD work from Instrumentation Technology research centre on 15.08.2020.
- **Dr. Prasanna Kumar S C, Professor**, attended Ph.D Colloquium on 24.08.2020 for Ph D scholar Roopa J, Dept of ECE, RVCE.
- **Dr. Prasanna Kumar S C, Professor**, attended Ph.D open seminar 2 of Manjunath Managuli Guided by Abhaya Deshpande on 29.08.2020 Dept of ECE, RVCE.
- **Dr. Prasanna Kumar S C, Professor**, attended online BOS Meeting at DSCE, Dept of EIE on 03.08.2020.
- **Dr. Padmaja K V, Associate Dean & Professor**, Invited as expert committee member for open seminar for monitoring the progress of P.hD scholar of Dr Seshachalam from ECE research centre , BMSCE on 22.09.2020.

- **Dr. Padmaja K V, Associate Dean & Professor** Invited to evaluate the Ph.D Thesis titled “User Assisted Cooperative Relaying in Beamspace Massive MIMO NOMA System for Millimeter Wave Communication” of Guru Nanak Dev University, Amritsar (Punjab), India in Electronics Technology area. The evaluation report was sent back to university on 07.09.2020.
- **Dr. Padmaja K V, Associate Dean & Professor** Invited under Margadarshan scheme, AICTE by Prof UMA, Co-ordinator RVCE to monitor NBA progress online of EAST WEST Institute of Technology programs on 23.10.2020.
- **Dr. Padmaja K V, Associate Dean & Professor**, Organized Doctoral committee meeting² of my Research scholar, Mr. Harsha for monitoring the progress of P.hD work from Instrumentation Technology research centre, RVCE on 09.11.2020.
- **Dr. Padmaja K V, Associate Dean & Professor**, Organized open seminar 1 of my Research scholar, Mrs. Chetana.G for monitoring the progress of her P.hD work from ECE research centre, RVCE on 10.11.2020.
- **Dr. Padmaja K V, Associate Dean & Professor** Invited as Domain expert for Doctoral committee meeting to check the progress of P.hD Research scholars working under the supervision of Dr Ravish Aradhya on 23.11.2020 at ECE Research centre, RVCE

8. *Placement Details of UG and PG:*

Table 10: UG Placement Details of 2020 Batch

Total Strength of class	52
Eligible students for placements	44
No. of students placed	39
Total no. of multiple offers	10
Percentage of placement	88.63
Maximum Package in LPA	19
Average Package in LPA	6.96
Minimum Package in LPA	3.6

Table 11: PG Placement Details of 2020 Batch

Total Strength of class	9
Eligible students for placements	9
No. of students placed	1
Total no. of multiple offers	-
Percentage of placement	11.11
Average Package in LPA	3