

# BUILDERS ENGINEERING COLLEGE



A NEWSLETTER OF

## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

### DEPARTMENT - VISION & MISSION

#### VISION

To be an updated technocrat in the field of Electronics and Communication Engineering.

#### MISSION

Preparing rural students for successful career through creative thinking and knowledge application

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## Vision of the Institution

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To be the most preferred knowledge provider.

## Mission of the Institution

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Builders Engineering College endeavors to prepare rural students for successful career through academic and applied research.

## About the Department

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Established in 2009, the Department commenced with an initial intake of 60 students. It boasts 10 fully-equipped laboratories, each adhering to university norms and furnished with cutting-edge technology.

The ECE Computer Centre provides students access to special software packages such as MENTOR GRAPHICS, PSPICE, MATLAB, Xilinx ISE, MULTISIM, MODELSIM, and KIEL.

The department stands out with its distinctive offerings, including advanced trainer kits, ARM Processors, Altera development boards, CPLD Trainer kits, and Wireless Sensor Networks trainer kits. These resources empower students to engage in real-time projects and practical learning experiences.

The department actively engages with professional bodies such as IEEE, IETE, and ISTE, providing a valuable platform for both faculty members and students.

## Programme Specific Outcomes (PSOs)

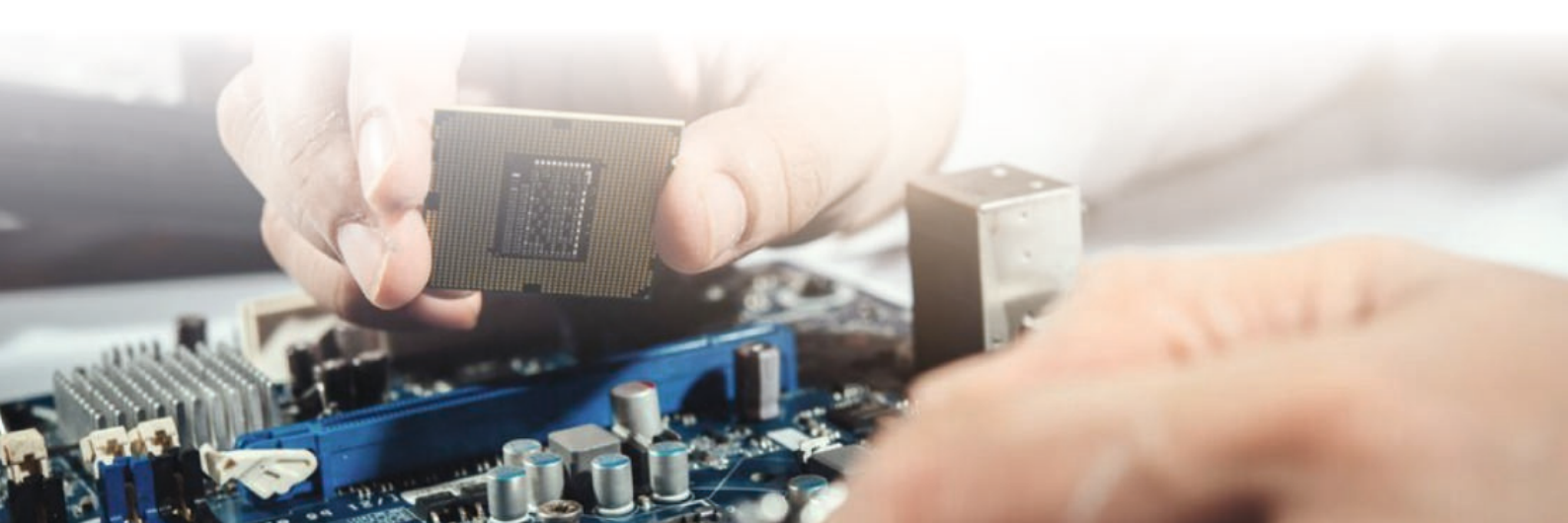
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- To design and develop complex systems in the research areas of next generation Communication Systems, RF and Power systems.
- To design and develop systems in the domains of IoT based Embedded Systems, Advanced Signal and Image Processing and latest Semiconductor technologies.

## Program Educational Objectives (PEOs)

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- Shall be successful in their professional careers, academic pursuits and research
- Shall study and build abilities on a continual basis in order to deliver high-impact, energy-efficient and futuristic solutions
- Shall demonstrate strong communication skills, a professional mindset and ethics in order to create and build real-world multidisciplinary solutions that are technically sound, economically feasible, and socially acceptable.







## Principal's Message

Builders Engineering College takes immense pride in presenting the latest edition of our Department of ECE Newsletter. This publication stands as a testament to the remarkable progress the college has achieved across academic and non-academic realms, as well as in fostering capacity building among both staff and students. We believe that this newsletter will not only inform but also inspire our readers, including those passionate about technical education and technology-driven initiatives.

I am deeply thankful to Mr. S.D. Vijayakumar, HoD/ECE, whose guidance has been instrumental in the successful completion of this technical endeavor within the designated timeframe. Furthermore, I commend the concerted efforts of our staff members and students, whose contributions have made this newsletter a reality.

With warm regards and best wishes,

**Dr. S. Gopalakrishnan**

Principal

## Words from Head of the Department

It is with great pleasure that I welcome you to this edition of our Electronics and Communication Department newsletter. As the Head of the Department, I am excited to share with you the latest updates, achievements, and insights from our vibrant community.

Our department prides itself on fostering academic excellence, promoting innovation, and nurturing the next generation of engineers and leaders in the field of electronics and communication. Through our rigorous academic programs, cutting-edge research initiatives, and collaborative efforts with industry partners, we strive to provide our students with the knowledge, skills, and experiences necessary to thrive in today's dynamic and ever-evolving technological landscape. In this newsletter, you will find a wealth of information highlighting the exceptional work of our faculty members, the remarkable achievements of our students, and the groundbreaking research being conducted within our department.

**Mr. S.D. Vijayakumar**

Head of the Department



# Editor's Desk

Dear Esteemed Readers,

Greetings and a warm welcome to the most recent edition of our Electronics and Communication Department Newsletter! As we navigate the ever-changing landscape of technology, we are delighted to present to you the latest advancements, achievements, and compelling projects from our department.

We take great pride in spotlighting the remarkable accomplishments of both our students and faculty, individuals who consistently push the boundaries of knowledge, contributing significantly to the progress of our field.

Our dedication to cultivating a collaborative and forward-thinking community is evident in the diverse array of events and activities showcased in this newsletter. Ranging from enlightening guest lectures by industry experts to hands-on workshops and invigorating hackathons, our goal is to furnish our students with opportunities to confront real-world challenges and elevate their skill sets.

As we embark on another semester brimming with promise and potential, we extend our sincere gratitude to our devoted faculty, spirited students, and the supportive community that surrounds us. Together, we are actively shaping the future of electronics and communication, and we are genuinely thrilled to have you accompany us on this journey.

Thank you for your unwavering interest and support. We trust you will find enjoyment in perusing this edition of our newsletter and encourage you to stay tuned for further updates from the Electronics and Communication Department.

Warm regards,

**Mr. U. Rajasekaran, AP/ECE**  
Managing Editor

## Editorial Team

### Editor in Chief:

Mr. S.D. Vijayakumar, HoD/ECE

### Managing Editor:

Mr. U. Rajasekaran, AP/ECE

### Concept & Design:

Ms. V. Manimala, AP/ECE

### Student-Chief Editor:

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### Associate Editors:

Mr. A. Sridhar, IV Year

Ms. A. Ayisha Banu, III Year



# EVENTS ORGANIZED



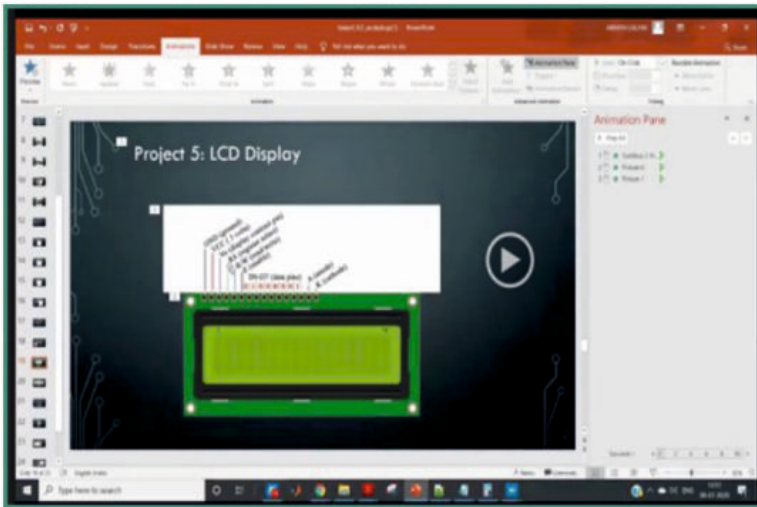
## Webinar on Data warehousing in IT June 03, 2020

The event on "Data Warehousing in IT" held on June 3, 2020, was a collaborative effort between the Student Association "GNAANA" and ISTE, featuring Ms. N. Sudha from Virtusa Services Private Limited, Chennai, as the resource person. Ms. Sudha shared insights into data warehousing, emphasizing its relevance in IT and exploring key concepts and real-world applications. The event aimed to deepen participants' understanding of data warehousing principles, fostering a culture of continuous learning beyond theoretical knowledge. Through collaboration, students gained exposure to industry insights and practical aspects of data warehousing, essential in the dynamic field of Information Technology. Ms. Sudha's expertise and the collaborative effort between the Student Association and ISTE provided a platform for students to embrace lifelong learning, crucial for success in an ever-evolving industry.

## Webinar on Introduction to MATLAB June 18, 2020

The Student Association "GNAANA" and ISTE jointly organized the "Introduction to MATLAB" event on June 18, 2020. Mrs. G. Soundarya, Assistant Professor at Builders Engineering College, Kangayam, served as the resource person, providing attendees with a comprehensive understanding of MATLAB's significance in engineering. The event aimed to familiarize participants with MATLAB's fundamentals and practical applications, particularly in signal and image processing. Through engaging sessions, students explored MATLAB's basics and connected with industry professionals and peers interested in the tool. The program outcomes focused on enhancing engineering knowledge and modern tool usage, aligning with the event's objectives. By bridging theory with practice, the event facilitated a collaborative learning environment, empowering participants with essential technical skills and proficiency in MATLAB. Overall, the Introduction to MATLAB event served as a valuable platform for knowledge exchange and skill development, emphasizing the tool's relevance in engineering disciplines and promoting collaboration among students and industry experts.

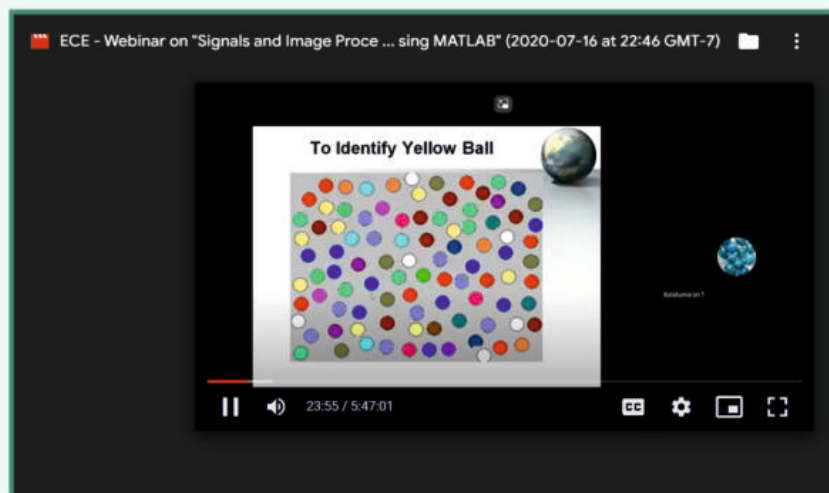




## Webinar on Open source Simulation Tool- Tinkercad

July 09, 2020

In the academic year 2020-21, on July 9, 2020, the Student Association "GNAANA" and ISTE organized the "Open Source Simulation Tool - Tinkercad" event. Its aim was to introduce participants to Tinkercad, an open-source tool for electronics and circuit design. Mr. V. Venkataramanan, Assistant Professor at D.J. Sanghvi College of Engineering, Mumbai, led the event, providing a comprehensive introduction to Tinkercad's features. Attendees engaged in hands-on sessions, simulating electronic circuits. The collaboration between "GNAANA" and ISTE facilitated exploration of open-source tools and enhanced students' skills. The event aligned with program outcomes such as engineering knowledge, modern tool usage, and lifelong learning, fostering a culture of exploration and continuous learning in engineering.



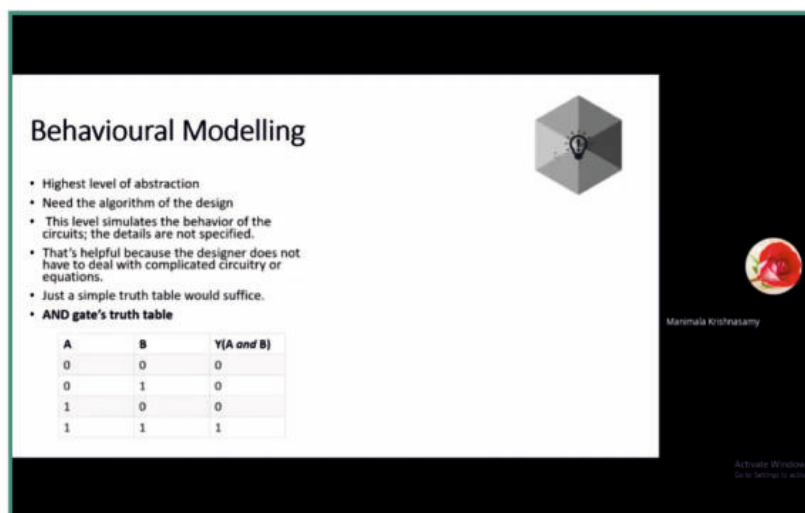
## Webinar on “Signals and Image Processing using MATLAB”

July 17, 2020

The webinar on "Signals and Image Processing using MATLAB" held on July 17, 2020, and organized by the Student Association "GNAANA" and ISTE, aimed to offer participants a deep understanding of these concepts. Led by Dr. T. Balakumaran, Assistant Professor at Coimbatore Institute of Technology, Coimbatore, the session delved into practical applications and techniques in signals and image processing through hands-on sessions and expert guidance.

The program outcomes were effectively addressed during the event. It strengthened participants' engineering knowledge in signals and image processing while enhancing their proficiency in using MATLAB as a modern engineering tool. The combination of theoretical insights and practical experience enabled a comprehensive development of technical skills among the attendees. Overall, the webinar provided a valuable platform for participants to gain expertise in signals and image processing, thereby preparing them for future endeavors in the field.





## HDL Programming - Unlock Your Programming Skills

July 20, 2020

In the academic year 2020-21, on July 20, 2020, the Student Association "GNAANA" and ISTE jointly organized the event "HDL Programming - Unlock Your Programming Skills" to delve into Hardware Description Language (HDL) programming. Led by Prof. V. Manimala from Builders Engineering College, Kangayam, the event aimed to equip participants with comprehensive HDL knowledge. Prof. Manimala introduced HDL's significance in digital design, guiding participants through hands-on sessions to apply HDL concepts in designing digital circuits. The event fostered a problem-solving approach, enabling participants to tackle real-world challenges with HDL techniques. By mapping to PO1 and PO5, it emphasized enhancing engineering knowledge and modern tool usage proficiency. The collaboration with GNAANA and ISTE enriched the learning environment, offering students a chance to explore emerging technologies and engage with industry experts. Overall, the HDL Programming event not only empowered participants with essential skills but also highlighted the importance of HDL in contemporary engineering practices.

## STUDENT PARTICIPATION

Date	Faculty Name	Title of the Paper/Project/Event	Venue
20.08.2020	Ms. S. Maheshwari	Seminar-Everything You Always Wanted to Now About High Voltage Power Lines	IEEE BUBT Student Branch
06.10.2020	Mr. S. Prasanth	TECHRON'20	Bannari Amman Institute of Technology
29.10.2020	Mr. K. Venkatramanan	Workshop- Responsive website-hosting,database,connectivity using firebase	Devscript 0
07.11.2020	Ms. G. Harini	Quiz,SSCETE Quiz	Sri Subramaya Engineering College
07.11.2020	Ms. T. Indhumathi	Quiz,SSCETE Quiz	Sri Subramaya Engineering College
24.11.2020	Ms. S. Maheshwari	Workshop-Radio Career	Venkataswamy naidu college
30.11.2020	Ms. S. Maheshwari	Workshop- Machine Learning and Deep Learning techniques and their use cases	Aarupadai Veedu Institute of Technology

# FACULTY PARTICIPATION

Duration	Faculty Name	Title of the Programme
14.09.2020 to 19.09.2020	Mr. S.D. Vijayakumar	STTP on Post COVID challenges in teaching Learning
13.07.2020 to 18.07.2020		Recent Trends in Electronics and Communication
14.12.2020 to 20.12.2020		STTP on AI in Healthcare
22.06.2020 to 26.06.2020		FDP on EC8701 - Antennas and Microwave Engineering
20.07.2020 to 25.07.2020	Ms. V. Manimala	FDP on Modelling, Measurement and Research trends in Micro strip Patch Antenna
22.06.2020 to 26.06.2020		FDP on EC8701 - Antennas and Microwave Engineering
23.11.2020 to 28.11.2020	Mr. S. Mahendran	Solar PV Technology: Envisaged Future challenges and Mitigation methods for High Pho-voltaic Penetration
14.09.2020 to 18.09.2020		Recent trends in Embedded systems and computational intelligence
15.07.2020 to 18.07.2020		FDP on PYTHON Programming
14.12.2020 to 20.12.2020	Ms. G.Vijayakumari	STTP on AI in Healthcare
14.07.2020 to 18.07.2020	Ms. G. Soundarya	Workshop on Basic MATLAB Programming
22.06.2020 to 26.06.2020		Advances in Antenna Design Techniques and Simulations using CST Studio Suite
08.08.2020 to 22.09.2020	Mr. J. Samsuresh	Online Internship program on Design and verification using Verilog
12.10.2020 to 16.10.2020		RF devices for 5G Communications Measuring Instruments
06.07.2020 to 10.07.2020		FDP on Nanoelectronics Devices and Circuit Design
14.07.2020 to 18.07.2020	Mr. S. Sathish	Workshop on Basic MATLAB Programming

## STUDENTS CORNER

### Future Trends in 2021

by *Mr. Jaya Vignesh, III ECE*

- Remote work evolution
- 5G Implementation
- E Commerce Transformation
- Health tech innovations
- Block chain applications
- Sustainability Initiatives