

## Department of Electronics and Communication Engineering

# Faculty Achievements

Mrs. Jyothi .H. R., Ms. Lavanya Vaishnavi D. A., Dr. Harish S. and Dr. Anil Kumar C., contributed to the publication of the book Computer Organisation and Architecture, focusing on core computing concepts, processor design, memory hierarchy, and system-level architecture for engineering students.

Dr. Anil Kumar C, Dr. Shivaprasad K M, Dr. Madhu Chandra G, Dr. Harish S, Dr. Kumarswamy J, Dr. Shilpakala V, Ms. Aarthi V, Mr. Vijay Kumar, Ms. Lavanya Vaishnavi D A and Mrs. Jyothi H R actively participated in a one-day Faculty Development Program on Advances in Artificial Intelligence, organized by the Department of CS&E (Artificial Intelligence & Machine Learning), enhancing her knowledge of emerging AI concepts and applications.

Dr. Harish S. successfully completed the AICTE–ATAL Faculty Development Program on Innovations in Space and Defense, gaining advanced insights into artificial intelligence, cybersecurity, advanced materials, and energy solutions for interdisciplinary research and education.

Ms. Lavanya Vaishnavi D A, Assistant Professor, R. L. Jalappa Institute of Technology, participated in the Computer Systems and Machine Learning workshop organized by the Department of Computer Science and Automation, IISc Bangalore, held from 22–25 November 2025, gaining advanced exposure to systems and ML techniques.

Ms. Jyothi H R, Assistant Professor, R. L. Jalappa Institute of Technology, successfully participated in the workshop on Computer Systems and Machine Learning conducted by the Department of Computer Science and Automation, IISc Bangalore, from 22–25 November 2025, enhancing her knowledge of computing architectures and machine learning models.

Ms. Lavanya Vaishnavi D A, Assistant Professor, R. L. Jalappa Institute of Technology, served as a mentor for the NPTEL online certification course Computer Architecture and Organization during the July–December 2025 session, guiding enrolled students and supporting effective learning and assessment activities.



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Doddaballapur-561203, Bangalore Rural



**Department of Electronics and Communication Engineering**

# Faculty Achievements

Ms. Jyothi H R, Assistant Professor, R. L. Jalappa Institute of Technology, acted as a mentor for the NPTEL online certification course Computer Architecture and Organization during the July–December 2025 period, facilitating student participation and providing academic guidance throughout the program.

Dr. Anil Kumar C, Associate Professor, successfully completed the NPTEL online certification course Computer Architecture and Organization conducted from July–October 2025 for a 12-week duration, strengthening his expertise in processor architecture, memory systems, and performance evaluation.

Dr. Harish S, Associate Professor, completed the NPTEL online certification course Computer Architecture and Organization during July–October 2025, a 12-week program, achieving elite performance and enhancing his advanced understanding of architectural design principles and computing systems.

Ms. Lavanya Vaishnavi D A, Assistant Professor, successfully completed the NPTEL online certification course Computer Architecture and Organization conducted from July–October 2025 with a 12-week duration, gaining in-depth knowledge of instruction pipelines, memory hierarchy, and processor organization.

Mr. Madhu Chandra G, Assistant Professor, completed the NPTEL online certification course Digital Circuits offered from July–October 2025 over a 12-week duration, strengthening his proficiency in combinational logic, sequential circuits, and digital system design concepts.

Mr. Madhu Chandra G, Assistant Professor, successfully completed the NPTEL online certification course Real-Time Digital Signal Processing conducted during July–October 2025 for a 12-week duration, enhancing his expertise in real-time signal analysis, DSP algorithms, and implementation techniques.

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# Faculty Achievements

L. Bharath, J. Kumaraswamy, Rajesh Purohit, and R. Suresh reported the effect of hot-rolling and heat treatment on Al7075/Gr/TiB<sub>2</sub> hybrid composites in Next Materials (2025), demonstrating refined grain size and nearly 58% improvement in yield strength through microstructural optimization.

Lavanya Vaishnavi D A and Anil Kumar C presented a supervised machine learning-based performance evaluation of OFDM systems under AWGN channels in Results in Engineering (2025), achieving improved BER and accuracy using KNN, SVM, and Random Forest classifiers.

Lakshminarayana Bharath and Jayappa Kumaraswamy investigated microstructure, hardness, and tensile strength of AW2024/B4Cp reinforced composites using linear regression in Mechanics of Advanced Composite Structures (2026), identifying optimal reinforcement conditions for enhanced mechanical performance.

Anil Kumar C, C. K. Narayanappa, Bhargavi S., and Harish S. explored nonlinear dynamics and chaos theory applications in control systems and signal analysis in the Journal of Interdisciplinary Mathematics (2025), providing mathematical modeling insights for complex engineering systems.

Rahul Bhagwat Mapari, Asif Ibrahim Tamboli, Prachi Tamhan, Yogita Shelar, Sushil Bhise, and C. Anil Kumar proposed a multi-modal AI framework for early tuberculosis detection in the Indian Journal of Tuberculosis (2025), integrating symptoms, chest X-rays, and clinical data for improved diagnostic accuracy.

Lakshminarayana Bharath and Jayappa Kumaraswamy presented a research article in Mechanics of Advanced Composite Structures (Vol. 13, 2026) investigating microstructure and optimizing hardness and tensile strength of AW2024/B4Cp composites using linear regression-based modeling techniques.



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# Scholar Progress

Mr. Anil Kumar R and Mr. Sunil Kumar B. S. have successfully completed their coursework examinations under the guidance of Dr. Anil Kumar C at the Affiliated Research Centre (R&D), Department of Electronics and Communication Engineering, demonstrating satisfactory progress in their research program during November 2025 examinations.

Two new research scholars have been enrolled at the Affiliated Research Centre (R&D), Department of Electronics and Communication Engineering.

Mrs. Jyothi H. R. (IRL25PECO1) and Mrs. Manju Shree S. Chavhan are pursuing their research under the guidance of Dr. Anil Kumar C. in academic year 2025-26

Ms. Lavanya Vaishnavi D. A. successfully completed Open Seminar-I on 29 November 2025 at the Affiliated Research Centre (R&D), Department of Electronics and Communication Engineering, under the guidance of Dr. Anil Kumar C, marking an important milestone in her research progress.



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# Faculty Achievements

The Internal Quality Assurance Cell (IQAC) of R. L. Jalappa Institute of Technology organized an Orientation Program for Fifth Semester (Third Year) subject-handling faculty members of the Electronics and Communication Engineering Department on 01 August 2025, from 2:00 PM to 4:00 PM, at the ECE Seminar Hall. The program aimed to familiarize faculty with the VTU 2022 Scheme and Syllabus changes for the academic year 2025–26 and to provide guidance on effective implementation.

The program commenced with a welcome address by Dr. Manjunatha B. N., IQAC Coordinator, followed by an introduction by Dr. Harish S., ECE IQAC Coordinator. Dr. Anil Kumar C. delivered detailed sessions on the revised syllabus structure, assessment strategies, and alignment of learning outcomes with modern pedagogical approaches. Emphasis was placed on active learning, blended teaching, continuous assessment, and industry relevance.

Faculty members actively participated in discussions, shared feedback, and gained clarity on curriculum delivery. The program successfully enhanced faculty preparedness for effective syllabus implementation.

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# Faculty Achievements

### March 2025

1. Dr. Anil Kumar C. served as a Session Chair for the International Conference on Smart Systems for Application in Electrical Sciences-2025, held at SIT, Tumakuru, on 21-22 March 2025, contributing to technical deliberations and session coordination.
2. Dr. Harish S. served as a Session Chair at the International Conference on Smart Systems for Application in Electrical Sciences-2025, conducted at SIT, Tumakuru, on 21-22 March 2025, supporting academic discussions and research dissemination.

### February 2025

1. Dr. Anil Kumar C. attended a Faculty Development Program on "Chip Design to Tapeout" conducted from 3-8 February 2025, gaining practical exposure to VLSI design flow and semiconductor fabrication processes.
2. Dr. Harish S. attended the FDP on "Chip Design to Tapeout" held from 3-8 February 2025, enhancing knowledge in digital IC design and verification methodologies.
3. Dr. Madhuchandra G. attended the FDP on "Chip Design to Tapeout" during 3-8 February 2025, strengthening expertise in end-to-end chip design workflows.
4. Mr. Vijay Kumar attended the Faculty Development Program on "Chip Design to Tapeout" conducted from 3-8 February 2025, gaining insights into semiconductor design and tapeout processes.
5. Mrs. Jyothi H. R. attended the FDP on "Chip Design to Tapeout" held from 3-8 February 2025, enhancing her understanding of VLSI design methodologies.

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### January 2025

1. Dr. Anil Kumar C. attended the Academic Leadership Program organized by Bosch Tech Bites at the Bosch Global Learning Campus on 31 January and 1 February 2025, strengthening academic leadership skills.
2. Ms. Lavanya Vaishnavi D. A. attended the Academic Leadership Program conducted by Bosch Tech Bites at the Bosch Global Learning Campus on 31 January and 1 February 2025, enhancing leadership and institutional management skills.
3. Dr. Anil Kumar C. attended an FDP on “AI and Security: Current Trends and Future Research” from 20–25 January 2025, gaining insights into secure and intelligent systems research.
4. Ms. Lavanya Vaishnavi D. A. attended the FDP on “AI and Security: Current Trends and Future Research” conducted during 20–25 January 2025, strengthening knowledge in AI security domains.
5. Dr. Harish S. attended the FDP on “AI and Security: Current Trends and Future Research” from 20–25 January 2025, enhancing interdisciplinary research understanding.
6. Mrs. Jyothi H. R. attended the FDP on “AI and Security: Current Trends and Future Research” during 20–25 January 2025, expanding expertise in emerging AI security trends.

### 2024

#### October 2024

1. Dr. Anil Kumar C. contributed as a key organizer for the workshop titled “AI for Students: Build Your Own Generative AI Model”, conducted by Mr. Abhinav Devaguptapu on 22 October 2024.

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# Faculty Achievements

### July–October 2024 (NPTEL Certifications)

1. Dr. Madhuchandra G. successfully completed the NPTEL online certification course on “Digital Image Processing” during July–October 2024, enhancing expertise in image analysis and processing techniques.
2. Ms. Aarthi V. successfully completed the NPTEL online certification course on “Electronic Systems for Cancer Diagnosis” during July–October 2024, gaining interdisciplinary knowledge in biomedical electronics.
3. Dr. Anil Kumar C. successfully completed the NPTEL online certification course on “Introduction to Machine Learning” during July–October 2024, strengthening foundational and applied ML skills.
4. Dr. Harish S. successfully completed the NPTEL online certification course on “Introduction to Machine Learning” during July–October 2024, enhancing data-driven problem-solving abilities.
5. Ms. Lavanya Vaishnavi D. A. successfully completed the NPTEL online certification course on “Introduction to Machine Learning” during July–October 2024, gaining practical exposure to ML algorithms.

### 2024 (Publications & Achievements)

1. Dr. Anil Kumar C. published a research paper titled “Deep Learning–Based Approach for Early Detection of Osteoporosis Using X-ray Imaging”, ISSN: 1873-7056, Volume 2024, Issue 12.
2. Ms. Lavanya Vaishnavi D. A. co-published the research paper “Deep Learning–Based Approach for Early Detection of Osteoporosis Using X-ray Imaging”, ISSN: 1873-7056, Volume 2024, Issue 12.
3. Dr. Anil Kumar C. published a research paper titled “Automated Glaucoma Detection via Deep Learning Approaches”, ISSN: 1873-7056, Volume 2024, Issue 1, focusing on medical image analysis.
4. Ms. Lavanya Vaishnavi D. A. received the Best Innovative Teacher Award for the year 2024, recognizing excellence in innovative teaching practices and student engagement.
5. Dr. Shivaprasad K. M. achieved 100% student results in the Academic Year 2023–24 (Even Semester), reflecting effective teaching and mentoring.
6. Mrs. Shilpakala V. achieved 100% student results during the Academic Year 2023–24 (Even Semester), demonstrating strong academic delivery.

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# Faculty Achievements

### 2024–25 (Professional Service & Memberships)

1. Dr. Anil Kumar C. served as a Reviewer for the Asian Journal of Research in Computer Science during 2024–25, contributing to scholarly peer review.
2. Dr. Harish S. served as a Reviewer for the Asian Journal of Research in Computer Science during 2024–25, supporting academic quality assurance.
3. Dr. Harish S. served as a Reviewer for the 2nd International Conference on Knowledge Engineering and Communication Systems, held at SJGIT, Chikkaballapur, during 2024.
4. Mrs. Jyothi H. R. obtained professional membership in the Institution of Electronics and Telecommunication Engineers (IETE) during 2024–25.
5. Ms. Aarthi V. obtained professional membership in the Institution of Electronics and Telecommunication Engineers (IETE) during 2024–25.
6. Dr. Anil Kumar C. successfully completed the NPTEL course on “Digital Design with Verilog” during 2024–25, enhancing hardware description language expertise.
7. Dr. Harish S. successfully completed the NPTEL course on “Digital Design with Verilog” during 2024–25, strengthening digital logic design skills.
8. Ms. Lavanya Vaishnavi D. A. successfully completed the NPTEL course on “Digital Design with Verilog” during 2024–25, gaining practical Verilog design experience.
9. Mrs. Jyothi H. R. successfully completed the NPTEL course on “Digital Design with Verilog” during 2024–25, enhancing digital system modeling proficiency.