



|| Jai Sri Gurudev ||  
Sri Adichunchanagiri Shikshana Trust®

# SJB Institute of Technology

#67, BGS Health & Education City, Dr. Vishnuvardhan Road, Kengeri, Bengaluru - 560060



Dr. Ajay Chandran C.K.  
Ph.D, MURP, B.Arch, FIIA, AIIP, FIV, AIID, MISTE  
Principal



## Department of Electronics and Communication Engineering

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### Editorial Board

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**Vision:** Empowering Electronics and Communication engineers to meet the advancements in technological and societal needs.

### Mission:

- M1: To facilitate students in acquiring proficiency & providing eminence in Technical education.
- M2: To imbibe value based education that contributes to the human values, ethics and societal relevance
- M3: To foster culture of innovation, industry and research in developing intellectual professionals and entrepreneurs

### About the Department

Department of Electronics and communication Engineering was established in the institution during 2001. The department is AICTE approved and permanently affiliated to VTU and accredited by National Assessment and Accreditation Council (NAAC) with 'A' Grade.



Dr. K.V. Mahendra Prashanth  
Prof & HOD

The Department offers UG & PG courses. Further, it is recognized as "Research Center" by VTU. The department is strengthened with qualified Doctorates, Professors, Assoc. Professors, Asst. Professors and technical staffs. Apart from the academic events department also oversees the overall development activities. The students are being provided with state-of-the-art lab facilities; training / certification programs, industrial visits, periodic technical talks, workshops, conferences, empowering employability skills.

### Achievements

- 30 Ph.D scholars have registered under ECE Department research centre.
- Faculties of the Department are members of various professional bodies such as ISTE, IEI, IEEE and ACCS.
- Achieved Progressive results and placement records.

### Department Association with Industries

- MOU with NI systems (India) Pvt. Ltd to establish NI LabVIEW Academy for students and academic professionals.
- MOU with Intel Corporation (FICE), Knowx Innovations Pvt Ltd.
- MOU with University of Agricultural Sciences, M/s Win Global Tek, Speckbit Exploratories Private Limited, Loginware Softec Pvt Ltd.
- MOU with Rexroth Bosch Group to establish "Center of excellence for Training and research in Automation Technologies".
- MOU with Trainingworld 360 solution, Tequed labs, Dlithe Consultancy services Pvt Ltd.

### Department Activities

#### Funds

- VGST has approved two funding projects to our department worth Rs.35 lakhs for the year 2020-21.
- KFIST L2 : 20 Lakhs - Dr. Mahendra Prashanth (PI), Mr. Bhaskar (CO-PI)
- KFIST L1 scheme : 15 Lakhs - Dr Mahantesh (PI), Dr Ajay (CO-PI)
- Received Rs 4500/- fund during 44<sup>th</sup> Series of Student Project Programme 2020-21 from Karnataka State Council for Science and Technology for the student's project titled "NEXUS" under the guidance of Dr. Chandrappa D N.
- Received Rs 7000/- fund during 44<sup>th</sup> Series of Student Project Programme 2020-21 from Karnataka State Council for Science and Technology for the student's project titled "Design and Development of BCI Model to assist aged or physically challenged people" under the guidance of Dr. Mahantesh K.

### Workshop / Seminar / Conference / Technical Talks

- Department in Association with Dlithe Consultancy Services Pvt Ltd conducted three days workshop on "Experiential Learning on Intel Galileo Board and its Applications on 29<sup>th</sup> – 31<sup>st</sup> July 2021 for faculty and technical staff.
- Conducted online International conference on Distributed Computing and Optimization Techniques (ICDCOT), Springer – Lecture Notes in electrical Engg in association with Technical Institute for Engineers, Bengaluru, India on 25<sup>th</sup> - 26<sup>th</sup> June 2021

- Alumni Talk was conducted on "Higher Education" by Meghana J (Alumni) on 24/7/21 for 6<sup>th</sup> Sem Students.
- Conducted Corporate Social Responsibility drive for final year students (2021 batch) in association with Global Quest Technologies, Bengaluru on 10<sup>th</sup> July 2021 initiated by Dr. Supreeth HSG and Mrs. Pushpalatha G.
- Organized a talk entitled "Art of Mind Management and Emotional Balance" with the objective of enabling the students with the mental balance to brave against the outbreak of the COVID-19 pandemic. The experts from Youth empowerment club of ISKCON Bangalore presented online session to fight against fear, anxiety, uncertainty and how to build a strong positive attitude and develop great control over your thoughts on 8<sup>th</sup> June 2021.
- Conducted virtual seminar on "Intellectual Property Rights" in association with IEEE Bangalore Chapter by Mrs. Preetha Joseph, principal scientist, Ministry of Defence on 23-07-2021 initiated by Mr. Rahul Rai and Mrs. Latha S
- Conducted Webinar series on "Trending Topics" in association with Global Quest Technologies, Bengaluru by Mr. Narendra, CEO, Global Quest Technologies on 02-09-2021 initiated by Dr. Supreeth HSG and Mrs. Pushpalatha G

#### MOU Initiatives

- MOU is signed between Department of ECE and M/s. Jyothi Microsystems( RF and Microwave) for Internship, training, Projects, Placement assistance and FDP on 31/8/2021 by the coordinators Dr. Anitha P and Mrs. Latha S.



- MOU is signed between Department of ECE and Global Quest Technologies for Internship, Training, Placement assistance, FDP and Innovative Product Development on 30/8/2021 by the coordinators Dr. Supreeth HSG and Mrs. Pushpalatha G.



#### Farewell

- Department organized farewell to 2020 batch passed out students on 14/8/2021 in CSE Seminar Hall.



- Department organized farewell to 2021 batch pass out students on 31/7/2021 in CSE Seminar Hall.



#### Community Service

- ECE Department Staff Club arranged a visit to Spandana Resource Center (a special school for Mentally Challenged children and resource center for parents) at Kaiwara Hobli, Chintamani Taluk, Chikkaballapura District, Karnataka on 02-03-2021. Stationery, eatables, board games and toiletries worth about Rs. 5000/- were distributed to mentally challenged children.



#### Faculty Achievements

- Dr. K.V. Mahendra Prashanth has been nominated as one of the member of Advisory committee in establishing "Centre of Excellence on Agricultural Drones and Robotics" at University of Agricultural sciences, as per the recommendation of Director of Education, GKVK.
- Dr. Rekha KR was awarded as Indian Women Achievers Award- 2021 From Big Dreams & Event Exhibitions – India, category: Books and Stationery publications, Award title: Excellence in Educator and Institutions on 7<sup>th</sup> March 2021.



- Dr. Rekha KR was recognized as a Professional life time member of Institute of Scholars (InSc).
- Dr. Komala M published patent entitled "Method for Diagnose and Management of Faults in Smart City Cleanliness Administration using self-adaptive Machine learning" on 8/22/2021.
- Dept. of ECE published a patent of GOI by Dr. Kumutha. D from ECE, along with four faculty of SJBIT.
- Dr. Mahantesh K was invited as a Resource person for AICTE Sponsored 6 Days STTP on "Research and Applications of AI and ML", February 8<sup>th</sup> - 13<sup>th</sup>, 2021, EWIT, Bangalore.
- Dr. Mahantesh. K, ECE Dept., Associate Professor published review article "Assessment and Application of EEG: A Literature review" got published in one of the most reputed journal (Journal of Applied Bioinformatics & Computational Biology. ISSN: 2329-9533) in association with professors of Tandy School of CS, OK, US on 26<sup>th</sup> July 2021.



#### • Placement

The Following list of companies recruited the students of ECE during the academic year 2021.

Name of the company	No. of students selected
Accenture	03
Sonata Software	06
Mavenir Systems Pvt LTD.	01
Attra Infotech	01
Cognizant Technologies	02
Binder Dijker Otte	01
Brillio Technologies	01

#### • Staff Publication:

Sl. No	Faculty Name	Title of the Paper	Month and Year of Publication	Conference Or Journal
1.	Dr. K. V. Mahendra Prashanth	Automatic segmentation of lumbar spine L1-L5 for detection of osteoporosis: Review	2021	World journal of Engineering research and technology (WJRET) Volume-7 Issue-2 Copernicus index-ICV-79.45, ISSN 2454-695X, IF-5.924 Pages 135-146, Web of science
		Detection of Osteoporosis in Lumbar Spin (L1-L4) trabecular bone: a review article	2021	International Journal of Research in Orthopedics, Volume 4, Year 2021, Pages 872-884 Copernicus index-ICV-100
2.	Dr. Rekha K R/ Geethanjali .N	Design and Implementation of a Efficient Router using X Y Algorithm	Jun 2021	Indian Journal of Data Communication and Networking (IJDCN), Volume 1 (3), Web of science
3.	Dr D.N.Chandruppa	Global Cooperative Image Prefetching In Mobile Ad Hoc Networks	Jul 2021	International Journal of Advanced Intelligence Paradigms, 2021 Vol.19 No.3/4, pp.357 – 369 Scopus Indexed



4.	Dr. Mahantesh K	Assessment and application of EEG: A literature review	Jul 2021	Journal of applied bioinformatics and computational biology, ISSN:2329-9533, July 2021, Vol-10, Issue-7 Copernicus index-ICV-80.61, IF-1
5.		Learning Semantic Features for Classifying very Large Image Datasets using Convolutional Neural Network	2021	SN Journal of Computer Science, Springer, <a href="https://doi.org/10.1007/s42979-021-00589-6">https://doi.org/10.1007/s42979-021-00589-6</a> , Vol 2, 187, pp. 1-9, SCI/Scopus, Q2, IF-0.45, H-index-42.
6.		DSB: Dominating Set Based Arbitrary Oriented Bilingual Text Localization for Improving Recognition Phase in Natural Scene Images	2021	IJECE, DOI:ISSN 2088-8708, e-ISSN 2722-2578, SNIP: 1.144; SJR: 0.368; CiteScore: 1.63; SJR & CiteScore Q2, Scopus indexed
7.		An Ensemble Model to Extract Discriminative Features for Semantic Image Classification in Large Datasets	2021	Lecture Notes in Electrical Engineering (LNEE), Springer book series, Scopus Indexed, Q4, IF-0.13
8.	Dr. Anitha P / Mrs. Latha S	Miniaturized defected ground structure Microstrip patch antenna design for X and KU band application	2021	Lecture Notes in Electrical Engineering (LNEE), Springer book series, Scopus Indexed, Q4, IF-0.13

### Technology:

#### Smart Shoe for Diabetic Neuropathy

The footwear is an intelligent system that senses foot pressure, foot temperature, a person's gait, and neuromuscular response to vibration or thermal or electrical stimuli. The device records information from the wearable, such as pressure, temperature, response to stimuli, and motion. Deep learning algorithms process the data. This processing happens through hybrid computing. In response to this data, the system delivers personalized therapy through electric or magnetic stimuli, vibration, or thermal or light pulses.

