Name	:	**Dr. Chayalakshmi C. L.**

Designation	:	**Associate Professor**
Department	:	**Electronics and Computer Engineering**
Employee ID	:	**TEI003**
E mail ID	:	**clcei@becbgk.edu**
(College official ID), (Personal mail ID)		**chayalakshmi.cl@gmail.com**

Contact details	:	**"Chittara", H. No: 49/1, Road No. 10, Vidyagiri, Bagalkot**

Orcid ID	:	**http://www.orcid.org/0000-0003-0489-100X**
Scopus ID	:	**55375318800**
Vidwan Id	:	**125014**
Researcher ID (Web of Science)	:	**AAG-1351-2021**
Google Scholar ID	:	**g0iM2ekAAAAJ**

Qualification	:	**Ph. D.**
Professional Experience		
Teaching experience	:	**27 years**
Industry experience	:	**-**
Administrative Responsibilities	:	

1. Head of the Department of E&IE from August 2015-December 2017
2. Assistant Placement Officer from Dec.2020 till Sept. 2023
3. NAAC Coordinator for cycle2
4. Chief coordinator for Proof reading and Printing section from 2023-24.
5. Coordinator for question paper scrutiny since from the academic year 2018-19
6. Coordinator for Online courses from the academic year 2018-19
7. Coordinator for Bosch- Rexroth Centre of Excellence from 2011-12 to 2014-15
8. First Gymkhana Cultural coordinator for the academic years 2009-11
9. Coordinator for EIE department association for the academic year 2008-09.

10. Coordinator for valuation work for the academic years 2008-09, 2010-11
11. Chairman of Board of Studies (EIE) for academic year 2015-17
12. Member of squad committee of the college for academic year 2013-14 to 2017-2020, 2021-22.
13. Member of SOP committee of the college from the academic year 2019-2020
14. Coordinator for proof reading and printing for the academic year 2017-18
15. Faculty Advisor for ISOI-BEC Student Chapter for the academic year 2019-2020
16. Joint Coordinator for NAAC BEC working group
17. Coordinator for preparation of VGST Project Proposal for setting up centre for innovative Science, Engineering and Education
18. Coordinator for an online FDP on Six Sigma from 6th to 10th July 2020
19. Coordinator for MISSION10X AARMBH program in our college
20. Member of Equivalence Committee of the institute
21. Member of Internal Complaint Committee of the institute for the academic year 2020-21
22. Member of BEC rules and regulation drafting committee for the academic year 2020-21

Teaching :

No. of Projects Guided

UG : **35**

PG :

Research

Interest Area :

1. Embedded Systems
2. Internet of Things
3. Embedded Programming
4. Virtual Instrumentation
5. Hardware
6. Industrial Automation

No. of Research Scholars

Pursuing : **03**

Awarded : **--**

Patents : A provisional specification patent (Application No.: TEMP/E-1/19965/2018-CHE) applied with the title **"Temperature controlled feed unit for life span enhancement of filter membranes in water and similar liquid purifiers"**

Research Grants :

1. *Co-coordinator for AICTE-RPS Grant of Rs. 11,63,000.00, for the Ph D project titled "Design and development of novel method of embedded based data acquisition and control system for process industry" during the academic year 2012-13*
2. *Co-PI for K-FIST (L1) under VGST grant of Rs. 15,00,000.00 for the project titled "Infrastructural development for designing and developing*

portable biodiesel production unit" during the academic year 2021-22

Publications Books/Chapters	: ***Book Chapters:***

1. Chayalakshmi C. L., D. S. Jangamshetti, Savita Sonoli, "Real Time Remote Monitoring and Measurement of Loss due to Dry Flue Gas", *3rd International Conference on Advances in Power Electronics and Instrumentation Engineering,* August 2012, Vol.150, pp. 490-495, ISSN:1876-1100, ISBN: 978-1-4614-3362-0,Springer-Verlag Berlin Heidelberg.

2. "Microcontroller Based System for Preserving Vegetables", Chayalakshmi C. L., Bhat K., *EAI/Springer Innovations in Communication and Computing*, 2021, pp. 393–399, https://doi.org/10.1007/978-3-030-49795-8_38

3. "Microcontroller Based Semi-automated Pineapple Harvesting System", Bhat K., Chayalakshmi C. L., *EAI/Springer Innovations in Communication and Computing*, 2021, pp. 383–392, https://doi.org/10.1007/978-3-030-49795-8_37

4. Chayalakshmi C. L., Mahabaleshwar S. Kakkasageri, Rajani S. Pujar, Nayana Hegde, "IoT Sensors for Smart Automation: A Systematic Review", Chapter 6, pp. 141-170, Contributed chapter in book titled, "AI and Blockchain Applications in Industrial Robotics", Dr Rajashekhar C. Biradar, et. al., (Edts.), IGI Global publishers, 2023

5. Chayalakshmi C. L., Rajani S. Pujar, Mahabaleshwar S. Kakkasageri, "Machine Learning Fundamentals", Contributed chapter in book titled, "AI and Blockchain in Smart Grids: Fundamentals, Methods, and Applications", CRC press, 2024

Journals (with citations)	:

1. Chayalakshmi C. L., Krishnamurthy Bhat, B. G. Sheeparmatti, "Tilt angle measurement using accelerometer IC and communicating the data between ARM processors using CAN protocol," *National symposium on Instrumentation (NSI-31)*, Gwalior, India, October 2006, pp.173.

2. Chayalakshmi C. L., Krishnamurthy Bhat, B. G. Sheeparamatti, "Tilt Angle Measurement using Accelerometer IC and Communicating the Data between ARM Processors using CAN Protocol", Journal of The Instrument Society of India, Volume 38, No. 2, 15th June 2008, pp. 156-164.

3. Krishnamurthy Bhat, Chayalakshmi C. L., "Design and Development of versatile saline flow rate measurement system and GSM based remote monitoring device," *International Journal of*

Pharmaceutical Applications, ISSN: 0976-2639, Vol.3, Issue 1, 2012, pp. 277-281.

4. Chayalakshmi C. L., D.S. Jangamshetti, Savita Sonoli, " ARM7 based Automatic Soot Blower Control System," *International Journal on Instrumentation and Control System*, Vol. 4, No. 3, ISSN: 2249-1147 [online],DOI : 10.5121/ijics.2014.4302, July 2014, pp. 11-19.

5. Chayalakshmi C. L., D. S. Jangamshetti, Savita Sonoli, "ARM7 based Automatic Soot Blower Control System", *International Journal of Instrumentation and Control Systems (IJICS)*, Vol.4, No.3, July 2014, ISSN: 2249- 1147.

6. Chayalakshmi C. L., D. S. Jangamshetti, Savita Sonoli, "Monitoring Boiler Efficiency using DASY Lab and a Case Study on Analysis of Boiler Losses," *International Journal of Innovative Research in Electrical, Electronics, Instrumentation and Control Engineering*, impact factor:3.885, DOI:10.17148/IJIREEICE.2015.3616, Vol. 3, Issue 6, ISSN: 2321-2004, June 2015, pp. 68-74.

7. Chayalakshmi C. L., D. S. Jangamshetti, Savita Sonoli, "Time Series Analysis And Forecasting of Boiler Efficiency," *International Journal of Electronics, Communication & Instrumentation Engineering Research and Development (IJECIERD),* ISSN(P): 2249-684X; ISSN(E): 2249-7951,Vol. 6, Issue 1, Feb 2016, pp. 1-8, won BEST PAPER AWARD

8. Chayalakshmi C. L., D. S. Jangamshetti, Savita Sonoli, "Parameter Optimization for Forecasting of Boiler Losses and Efficiency using Statistical Model," *Journal of Control and Instrumentation Engineering*, Vol. 2, Issue 1, 2016, pp.1-19.

9. Chayalakshmi C. L., "Smart Phone for Personal Health Care Monitoring System," *International Journal of Instrumentation and Control Systems*, Vol. 6, No. 4, October 2016, pp. 1-7.

10. Chayalakshmi C. L., Basavakumar Jigalur, Prasanna Kori, Pramada Karav, Rohini Patil, "Automated Chilli Seed Extractor Useful for Indian Farmer," *International Journal of Instrumentation and Control System(IJICS),* Vol. 7, No. 4, October 2017, pp. 7-13.

11. Chayalakshmi C. L., D. S. Jangamshetti, Savita Sonoli, "Multiple Linear Regression Analysis for Pridiction of Boiler losses and Boiler Efficiency," *International Journal of Instrumentation and Control System*, Vol. 8, No. 2, April 2018, pp.1-9.

Conferences :

1. Chayalakshmi C. L., Krishnamurthy Bhat, B. G. Sheeparmatti, "Acceleration and Tilt angle measurement using ARM Processor and CAN protocol implementation for data transmission'", *3rd National Conference on Control Instrumentation System*, Manipal, 2006, pp. 85-88.

2. Chayalakshmi C. L., Krishnamurthy Bhat, B. G. Sheeparmatti, "Tilt angle measurement using accelerometer IC and communicating the data between ARM processors using CAN protocol," *National symposium on Instrumentation (NSI-31)*, Gwalior, India, October 2006, pp.173.

3. Krishnamurthy Bhat, Chayalakshmi C. L., "Tilt angle Measurement using acceleration IC and CAN protocol implementation for data transmission," *7th WSEAS International conference on Applied Informatics and Communication,* August 2007, ISSN: 1790-5117, ISBN: 978-960-8457-96-6, pp. 300-304.

4. Chayalakshmi C. L., D. S. Jangamshetti, Savita Sonoli, "Real Time Remote Monitoring and Measurement of Loss due to Dry Flue Gas", *3rd International Conference on Advances in Power Electronics and Instrumentation Engineering,* August 2012, Vol.150, pp. 490-495, ISSN:1876-1100, ISBN: 978-1-4614-3362-0,Springer-Verlag Berlin Heidelberg.

5. Chayalakshmi C. L., D. S. Jangamshetti, Savita Sonoli, "Design and development of an ARM platform based Embedded System for measurement of Boiler Efficiency", *IEEE International Symposium on Industrial Electronics and Applications,* September 2013, ISBN: 978-1-4799-1124-0/13.

6. Chayalakshmi C. L., Shankar C., Vinay D., Mallappa, Parth K., "ARM Processor based soil color sensing and identification system", *International conference on Electrical, Electronics, Computer Science, Management and Mechanical Engineering* ICE2CSM2E-2014 on 4th May at Pune, India and won excellent paper award.

7. Chayalakshmi C. L., Bhagyashree Biradar, Pooja Keshetti, "Personal Health Care Monitoring System using Smart Phone," *JIRAS International Conference on Innovative Research and Solutions* (ICIRS 2015), April 2015.

8. Chayalakshmi C. L., D. S. Jangamshetti, Savita Sonoli, "Boiler Efficiency Estimation from Hydrogen Content in Fuel," *IEEE 2015 International Conference on Advances in Computing, Communications and Informatics (ICACCI),* 978-1-4799-8792-4/15, Aug 2015, pp. 1107-1110.

9. Raikar Saishree D., Rohini S. Patil, Beerappa Tirlapur, Pranav K., Chayalakshmi C. L., "Detection of Nutritional Disorders in Pepper and Pomegranate Plants using MATLAB and LabVIEW," *International Conference on Emerging Trends in Engineering and Technology*, 10th January 2016, ISBN: 9788192958056, pp. 59-63

10. Krishnamurthy Bhat, Chayalakshmi C. L., "Microcontroller based Preserving system for Vegetable" *International Conference on Mobile Computing and Sustainable Informatics(ICMCSI-2020),* 23-24 January 2020, Nepal

11. Chayalakshmi C. L., Krishnamurthy Bhat, "Microcontroller based Semi Automated Pineapple Harvesting System" *International Conference on Mobile Computing and Sustainable Informatics(ICMCSI-2020),* 23-24 January 2020, Nepal.

12. Chayalakshmi C. L., Suparna Kapoor, "Synergic Case Study: Impact of Learning in Industry Training Center," *XV Latin American Conference on Learning Technologies*, 19th -23rd October 2020, Loja, Ecuador.

13. Krishnamurthy Bhat, Chayalakshmi C. L., "Advanced Glove for Deaf and Dumb with Speech and Text Message on Android Cell Phone," 2020 IEEE International Conference for Innovation in Technology, 6th to 8th November 2020, Bangalore.

14. *Anusha Muttinamath, Meghna Pawar, Soundarya Kulkarni, Darukprasad Sheelimath, Chayalakshmi C. L.,* "Design and Development of an IoT based Sound Pollution Monitoring System for Traffic Control" in National Symposium on Instrumentation (NSI-42) organized by ISOI, Kumaraguru College of Technology and DRDO Dehradun, 28th to 29th December 2020.

15. Manjunath G., Sushmita Bhinge, Vinuta Balakkanavar, Soundarya Ilegar, Chayalakshmi C. L., M. G. Kambalimath, "Bit Frostbite," *National Symposium on Instrumentation (NSI-42) organized by ISOI,* Kumaraguru College of Technology and DRDO Dehradun, 28th to 29th December 2020.

16. Rajani S. Pujar, Chayalakshmi C. L., Mahabaleshwar Kakkasageri, "Machine Learning based Dynamic Resource Allocation in 6G Networks", *Proc. IEEE International Conference for Intelligent Technologies (CONIT-2024)*, Hubballi, India, 21 – 23 June 2024

17. Rajani S. Pujar, Chayalakshmi C. L., Mahabaleshwar S. K., "Adaptive LMS Algorithm for Effective Noise Suppression", *Proc. IEEE North Karnataka Subsection Flagship International Conference (NKCon - 2024),* Bagalkote, India, 21 – 22 September 2024

18. Shrishail N. Chamatagoudar, Rajani S. Pujar, Mahabaleshwar S. Kakkasageri, Chayalakshmi C. L., "A Comprehensive Review of Resource Management Techniques in Edge Computing", *Proc. International Conference on Sustainable Solutions in Engineering and Technology (SSET- 2024)*, Bagalkote, India, 29 – 30 August 2024

19. Piyusha Shetgar, Chayalakshmi C. L., Mahabaleshwar S. Kakkasageri, Rajani Pujar, "Data Management in Edge Computing: Opportunities and Challenges", *Proc. International Conference on Sustainable Solutions in Engineering and Technology (SSET-2024)*, Bagalkote, India, 29 – 30 August 2024

20. Sadashiv Badiger, Chayalakshmi C. L., Mahabaleshwar S. Kakkasageri, Rajani S. Pujar, "Edge Computing based Smart Health Care System", *Proc. International Conference on Sustainable Solutions in Engineering and Technology (SSET-2024)*, Bagalkote, India, 29 – 30 August 2024

21. Krishnamurthy Bhat, Chayalakshmi C. L., "Anti-Sinking Airbag and Indicating System for Vehicle during Flood," *Proc. International Conference on Sustainable Solutions in Engineering and Technology (SSET-2024)*, Bagalkote, India, 29 – 30 August 2024

22. Anjali Honakeri, Nivedita M., Shweta Elangadi, Priyadarshini Jalikatti, Chayalakshmi C. L., "Home Automation using IoT," *Proc. International Conference on Sustainable Solutions in Engineering and Technology (SSET-2024)*, Bagalkote, India, 29 – 30 August 2024

23. Akash P. S., Deepa S. Patil, Sagar N. Odunavar,

Nagaprasad H., Chayalakshmi C. L., "LoRa based Smart Energy Meter for Theft Detection, " *Proc. International Conference on Sustainable Solutions in Engineering and Technology (SSET-2024)*, Bagalkote, India, 29 – 30 August 2024

Invited Talks	:	1. Faculty Development Programme on "Effective Teaching Practices", during 29th to 31st January 2010.

1. Faculty Development Programme on "Effective Teaching Practices", during 29th to 31st January 2010.
2. Faculty Development Programme on "Effective Teaching Practices", during 3rd to 5th March 2012.
3. STTP on "Recent Advances in Embedded Systems and VLSI", jointly organized by ISTE-SRM and S. R. Vastrad rural Polytechnic, Guledgud between 24th to 29th June 2013.
4. Guest lecture on "Introduction to Embedded System", organized by department of Electronics, BVVS Science college, Bagalkot on 02-03-2016.
5. Conducted 09 (nine) sessions on LabVIEW in ISTE TEQIP sponsored Short Term Training Programme between 7th to 11th November 2016, organized by department of Electronics and Telecommunication Engineering, Don Bosco College of Engineering, Margao, Goa.
6. One of the Conveners for ISTE TEQIP sponsored Short Term Training Programme between 7th to 11th November 2016, organized by department of Electronics and Telecommunication Engineering, Don Bosco College of Engineering, Margao, Goa.
7. Coordinator and Resource person for a workshop on AICTE Exam Reform Policy from 14th-15th February 2020 for BEC Faculty members.
8. Coordinator and Resource person for an online workshop on AICTE Exam Reform Policy from 29th -30th April 2020 and 6th – 7th May 2020, for BEC Faculty members
9. Online Guest Lecture on "Machine Learning for Mechatronics", organized by The Oxford College of Engineering, Bangalore, on 18th June 2020
10. Online training programme on " NAAC Accreditation Process-An Overview" under Paramarsh scheme, Presented to: Tontadarya College of Engineering , Gadag, on 16th July 2020
11. National level refreshment programme on "AICTE Examination Reform Policy" organized by NPIU New Delhi, from 7th to 8th December 2020.
12. Coordinator and Resource person for an online workshop on AICTE Exam Reform Policy from 18th -19th February 2021, for SOE CUSAT Faculty members.
13. Resource person for an online National webinar on "Capacity building and personality development programme (PDP)", organized by Akkamahadevi Womens' Arts, Science and Commerce College, Bagalkot on 30-10-2021
14. Resource person for a seminar on "Awareness on NPTEL Online Courses", organized by Department of Electrical and Electronics Engineering, Basaveshwar Engineering College, Bagalkot, on
15. Resource person for a seminar on "Awareness on NPTEL Online Courses," organized by Department of MCA, BEC, Bagalkote on

Events Organized	:	*Workshop/FDP/SDP:*

Workshop/FDP/SDP:
1. A student workshop on Advanced Microcontroller, from 15th to 17th February 2007
2. A student workshop on "ARM CORTEX M3", from 4th to 5th March 2014.
3. A student workshop on "LabVIEW: Concepts, Programming and

Interfacing", 11th to 12th March 2014.

4. A student workshop on "Graphical Solution using NI LabVIEW", 19th to 21st Sept. 2016

5. National level "NPTEL Workshop", 29th November 2019

6. An online National level Faculty Development Program on "Six Sigma", from 6th to 10th July 2020.

7. One day workshop on "Stress, Diet, and Disease Management" on 27th September 2023, Basaveshwar Engineering College, Bagalkot-587102

8. Skilling Program on "Drone Technology", 24 – 26 May 2024, Basaveshwar Engineering College, Bagalkot-587102

Guest Lecture:

1. A Guest Lecture on "Industrial Automation, by Mr. Anoop Rotti, Axis Controls, Mumbai, on 13th September 2016 .

2. Guest Lecture on "Disruptive Technologies" at BEC, Bagalkot on 7th March 2020, by Dr. Ajay Deshmukh and Mr. Satish Ranade, Pune

3. An online webinar on "Applications of IoT and Emerging Business Models" by Mr. Raghavendra Rao Krishnamurthy, Chief Operating Officer, and Head of IoT Domain Solutions, Bosch.IO X, Stuttgart Area, Germany on 4th July 2020.

4. Online webinar on "Recent Trends in Data Science and Analytics" by Dr. Udit Bhatia, IIT Gandhinagar on 5th December 2020.

Conferences/ Symposiums/ Workshops/ Training Programs Attended	:	*More than 30*
Awards and Honors	:	**Best Paper award**

1. Chayalakshmi C. L., Shankar C., Vinay D., Mallappa, Parth K., "ARM Processor based soil color sensing and identification system", *International conference on Electrical, Electronics, Computer Science, Management and Mechanical Engineering* ICE2CSM2E-2014 on 4th May at Pune, India and won excellent paper award.

2. Chayalakshmi C. L., D. S. Jangamshetti, Savita Sonoli, "Time Series Analysis And Forecasting of Boiler Efficiency," *International Journal of Electronics, Communication & Instrumentation Engineering Research and Development (IJECIERD),* ISSN(P): 2249-684X; ISSN(E): 2249-7951,Vol. 6, Issue 1, Feb 2016, pp. 1-8, won BEST PAPER AWARD

Session Chair:

Selected as a Session chair:

1. 2021 2nd Global Conference for Advancement in Technology (GCAT) during 1st to 3rd October 2021, organized by Nagarjuna College of Engineering and Technology, Bangaluru, technically co-sponsored by IEEE Bangaluru section.
2. 2021 International Conference on Smart Generation Computing, Communication, and Networking", during 29th to 30th October 2021, organized by AISSMS College of Engineering, Pune, Maharashtra, technically cosponsored by IEEE Pune section.

Selected for **NPTEL online course Translator** for

1. Fundamentals of Electrical Engineering (108105112)

2. Introduction to Electromagnetism (115104088)

3. Basic Electrical Circuits (117106108)