FACULTY PROFILE

Name : Dr. Krishnamurthy Bhat



Designation : Professor

Department: Electronics and Computer Engineering

Employee ID : TEI001

E mail ID (College official ID), (Personal

mail ID)

knbei@becbgk.edu send2kb@rediffmail.com mail12kb@gmail.com

Contact details : "Chittara", H. No: 49/1,

Road No. 10, Vidyagiri,

Bagalkot

Orcid ID : 0000-0003-4495-4116

Scopus ID : 56583599300

Vidwan Id : 125184

Researcher ID (Web of Science) : AAF-3153-2021

Google Scholar ID : r5cAPMYAAAAJ

Oualification : Ph.D.

Professional Experience

Teaching experience : 32 years

Industry experience : -

Administrative Responsibilities

- Total of 32 years of teaching experience (as on June 2024) and 15+ years as Head of E&IE Department (2007-2015 and AUG2018 till date)
- Presently Working as Professor in Electronics and Computer Engg.at Basaveshwar Engineering College (BEC), Bagalkot, Karnataka, India
- Guided various projects on electronic hardware for graduate and post graduate (M. Tech.) students of resident and outside institutes
- Sound practical knowledge in the field of Electronic-hardware design & development (hardware servicing), Sensor design, development & analog signal processing, PCB design & development and general electronic signal conditioning
- Worked as Expert/Consultant in Electronic Hardware Design for Texas Instruments Pvt. Ltd., Bangalore for 45 days in February- March 2010 to bring a commercial product "Analog Lab Kit"
- Designed and implemented an instrument on "Photo Diode Characteristic" which is included as one experiment by the department of Physics, Basaveshwar Engineering College, Bagalkot.
- Designed and implemented instruments on "PLC based Pneumatic piston Controller" & "PLC based conveyor belt" for Govt. Polytechnic, Bagalkot
- Worked in various capacities like academics, extra & co-curricular

- activities, administration
- Involved in various activities like teaching, entrepreneurship development, consultancy, department development, industry-institute interaction
- Worked as Chief Editor for "EXOERGIC" college magazine since 2012 up to 2016 (EXOERGIC-12, EXOERGIC-13, EXOERGIC-14, EXOERGIC-15, EXOERGIC-16)
- Mentor for KBITS- New Age Incubation Network of GoK at the college level from 2016-17 to 2020-21
- Member of BEC Rules & Regulation Committee from the academic year 2011-12 up today
- Member of BEC Examination Reform Committee from MAY 2020

Teaching

No. of Projects Guided

UG PG **Research** Interest Area

: Electronic-hardware design and development

Entrepreneurial activities

30

10

Sensor design and development

Real and virtual electronic measurement

Embedded systems

Electro-mechanical system design

Biofuels, biosensors, bioreactors

Patents

An invention entitled "An electro-mechanical system for prevention of wastage of cold water stored in hot water pipeline" (Patent Application No.: 2453/CHE/ 2015) is granted. Patent No: 347122 Date of Grant: 18 September 2020, Period of Grant: Up to 15 May 2035

Research Grants

Received a total of Rs. 15,00,000 from GoK, VGST grant under K-FIST(L1), titled Infrastructural Development for Designing and Developing Portable Biodiesel Production Unit" (GRD:1033)

PublicationsBooks/Chapters

: Book Chapters:

- 1. Krishnamurthy Bhat, Chayalakshmi C. L., "Microcontroller Based Semi Automated Pineapple Harvesting System," International Conference on Mobile Computing and Sustainable Informatics (ICMCSI 2020), International Conference on Mobile Computing and Sustainable Informatics, ICMCSI 2020, EAI/Springer Innovations in Communication and Computing, Springer, Cham. https://doi.org/10.1007/978-3-030-49795-8_37, ISBN(P): 978-3-030-49794-1, ISBN(O): 978-3-030-49795-8, pp. 383-392, December 2020.
- 2. Chayalakshmi C. L., Krishnamurthy Bhat, "Microcontroller Based System for Preserving Vegetables," International Conference on Mobile Computing and Sustainable Informatics (ICMCSI 2020), International Conference on Mobile Computing and Sustainable Informatics, ICMCSI 2020, EAI/Springer Innovations in Communication and Computing, Springer, Cham. https://doi.org/10.1007/978-3-030-49795-8_38, ISBN(P): 978-3-030-49794-1, ISBN(O): 978-3-030-49795-8, pp. 393-399, December 2020.

Journals

: 1. 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, June 2008, pp. 156-164.

- 2. C.C. Gavimath, Krishnamurthy Bhat, C.L. Chayalakshmi, R. S. Hooli, Ravishankera, "Design and Development of Versatile Saline Flow Rate Measuring System and GSM based Remote Monitoring Device", International Journal of Pharmaceutical Applications, ISSN 0976-2639, Volume 3, Issue 1, 2012, pp. 277-281.
- Krishnamurthy Bhat, Subhash N. Uppin, Veeresh S. Muttagi, Prashant P. Devaravar, Venkatesh.T.Pujari, "A novel method of smart phone protection using parachute and air-bag techniques by built in freefall detection", IRD International Journal of Recent Advances in Engineering & Technology (IJRAET), ISSN (Online): 2347 2812, Volume 2, Issue 1, pp. 26-29, January, 2014.
- Rohini N. Hongal, Roopa G. Sunagad, Shruti A. Gombi, Rohankumar Patil, Krishnamurthy Bhat, "A technical method of extraction of gold from ewaste: a multi-sensor based method using microcontroller", International Journal of Research in Engineering and Technology (IJRET), ISSN (O): 2319-1163, ISSN (P): 2321-7308, Volume 3 Special Issue 7, May-2014, pp. 94-97.
- Krishnamurthy Bhat, R. N. Herkal, "An Electro-mechanical system for prevention of wastage of cold water stored in hot water pipeline", Official Journal of Patent Office, India, Issue 22/2015, 29-05-2015, pp. 36360 (Patent Application No. 2453/CHE/2015).
- Sangeeta Jadhav, Krishnamurthy Bhat, A.V. Sutagundar, "PLC based remote guided vehicle for filling and disposal of toxic chemical for unmanned applications", MAT Journal of Electronic Design Engineering Volume 1 Issue 1-2, 2015, pp. 1-6.
- 7. Ankur S. Mahajan, Rajashekhar Y. Pattar, Krishnamurthy Bhat, "Innovative technique of production of alternate fuel for liquid petroleum gas (LPG) using solar energy", Journal of Innovative Research and Solutions (JIRAS), ISSN(P): 2320 1932, ISSN(O): 2348 3636, Volume 2, Issue 1, pp. 142-146, January June 2016.
- 8. Mangala. S. Hiremath, Krishnamurthy Bhat, H. M. Ravikumar, "PLC controlled suction adhesive lead screw mechanism based autonomous wall climbing robot for surface cleaning", International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering, IJAREEIE, Volume 5, Issue 4, pp. 2645–2649, April 2016, DOI:10.15662/IJAREEIE.2016.0504085.
- 9. Krishnamurthy Bhat, Bharati Meti, K. Chandrasekhar, "Automation technique for online transesterification process of biodiesel plant in India", International Journal of Bio-technology and Research (IJBTR), ISSN (O): 2249-796X; ISSN (P): 2249-6858, Volume 6, Issue 1, February 2016, pp. 13-18. Awarded as Best Paper by Trans Stellar Press (TJPRC).
- Krishnamurthy Bhat, Bharati Meti, K. Chandrasekhar, "Consolidation of available methods and design of a reliable physicochemical system for transesterification progress monitoring in bio-diesel reaction chamber," International Research Journal of Engineering and Technology (IRJET), e-ISSN: 2395-0056, p-ISSN: 2395-0072, Vol. 3, Issue 6, June 2016, Impact factor: 4.45, pp. 2334-2338.
- 11. Lakshmi Kadlimatti, Jyothi Hiremath, K. Bhat, "Design and development of automatic urine analyzer suitable for public toilets and transmission of vital composition to user's registered cell phone," International Research Journal of Engineering and Technology (IRJET), e-ISSN: 2395-0056, p-ISSN: 2395-0072, Vol. 3, Issue 7, July 2016, Impact factor: 5.181, pp. 741-744.
- 12. Santosh Gudi, K. Bhat, "Design and development of pneumatic suction based wall climbing robot for multiple applications," International Research Journal of Engineering and Technology (IRJET), e-ISSN: 2395-0056, p-ISSN: 2395-0072, Vol. 3, Issue 7, July 2016, Impact factor: 5.181, pp. 745-748.
- 13. Krishnamurthy Bhat, Soubhagya Hiremath "Overview of prime mineral

- content of Indian green leafy vegetables and a proposed non-invasive technical method of their estimation," International Journal of Science and Research Development (IJSRD), Vol. 5, Issue 9, November 2017, pp. 829-831, Impact factor: 4.396.
- 14. Ankur Mahajan, Krishnamurthy Bhat, "Innovative Technique of Production of Electric Power from Kinetic Flow of Water Flow in Pipelines," International Journal of Latest Technology in Engineering, Management & Applied Science (IJLTEMAS) Volume VIII, Issue IX, September 2019 | ISSN 2278-2540, pp. 101-103.
- 15. Ankur Mahajan, Krishnamurthy Bhat, "A Smart Car: Synergetic Combination of Low Cost Multiple Sensors for Safety and Accident Prevention," International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056 Volume 06, Issue 09, Sep 2019 www.irjet.net p-ISSN: 2395-0072 pp. 2138-2140.
- Krishnamurthy Bhat, Bharati S. Meti, K. Chandrasekhar, "Planar Inter Digital Capacitive Sensor for Real Time Transesterification Progress Monitoring of Karanja (Pongamia) Oil," Asian Journal for Convergence in Technology, Volume VI, Issue III, pp. 38-47, December 2020, DOI: https://doi.org/10.33130/AJCT.2020v06i03.008.
- 17. Arathi Nashi, Husnara Pinjara, Deepti Challagidad, Savita Girijavvagol, Krishnamurthy Bhat, "Plate Wiper: A Novel Plate Washing Machine using Dry Sand and Wiper to Save Water," International Journal of Advanced Science and Technology, Vol. 29, No. 10S, 2020, pp. 4134-4138, http://sersc.org/journals/index.php/IJAST/article/view/21103/10674
- 18. Chayalakshmi C. L., Krishnamurthy Bhat, "Arduino Based Green Veggie Chamber: Harnessing Kinetic Energy from Water Flow in Kitchen," International Journal of Innovative Research in Electrical, Electronics, Instrumentation and Control Engineering, Vol. 10, Issue 9, September 2022, pp. 14-21, DOI: 10.17148/JJIREEICE.2022.10903
- Chayalakshmi C. L., Krishnamurthy Bhat, "Acceleration & Tilt angle measurement using accelerometer IC and transmission of data using CAN protocol" 3rd National Conference on Control & Instrumentation System, CISCON-2006, Manipal Institute of Technology, Manipal, Karnataka, India.
- Chayalakshmi C. L., Krishnamurthy Bhat, "Tilt angle measurement using ARM processor and transmission of data using CAN protocol", 31st National Symposium on Instrumentation, NSI- 31, 2006, ITM, Gwalior, M.P, India.
- 3. Chayalakshmi C. L., Krishnamurthy Bhat, "Tilt angle measurement using accelerometer IC and CAN protocol implementation for data transmission", 7th World Scientific & Engineering Academy & Society (WSEAS), International Conference on Applied informatics & communication, AIC'07, 2007, Paper no. 564-328, Vouliagmeni Beach, Athens, Greece.
- 4. Krishnamurthy Bhat, Subhash N., Veeresh Muttagi, "An intelligent method of built in free fall detection and protection system with algorithm for smart phones using parachute and air-bag", IEEE International conference for convergence of technology (I2CT- 2014), Sharadchandra Pawar college of Engineering, Pune, Maharastra, India, 6 8 April 2014.
- Rohini N. Hongal, Roopa G. Sunagad, Shruti A. Gombi, Rohankumar Patil, Krishnamurthy Bhat, "A technical method of extraction of gold from e-waste: A multi sensor based method using microcontroller", International conference on Trends in Technology for Convergence (TITCON-2014), 8th -9 th April 2014, AVS Engineering College, Salem, Tamilnadu, India.
- 6. Krishnamurthy Bhat, Prasad Umargi, Somesh N., Akshata K., "GSM and GPS based automatic detection of crime using infrared camera and enhancing ambulance and cop assistance for accidents", 8th IRF International Conference on Electrical, Electronics, Computer Science,

Conferences

- Management and Mechanical, ISBN: 978-93-84209-12-4, Pune, 4 May 2014.
- V. Hallur, B. Atharga, A. Hosur, B. Binjawadagi, Krishnamurthy Bhat, "Design and development of a portable instrument for the detection of artificial ripening of banana fruit," IEEE International Conference on Circuits, Communication, Control and Computing (I4C), Bangalore, Karnataka, India, 2014, pp. 139-140, doi: 10.1109/CIMCA.2014.7057776.
- Sangeeta Jadhav, A.V.Sutagundar, Krishnamurthy Bhat, "PLC based remote guided vehicle for filling and disposal of toxic chemical for unmanned applications", Fourth International Conference on Advances in Computer Science and Application, CSA-2015, OCT 2015, pp. 1-7, Trivandrum, Kerala, India, ISBN: 978-1-5108-6049-0.
- 9. Pratima Ghattarki, Shilpa Joger, Krishnamurthy Bhat, "Innovative method of delayed ripening of banana fruit: A boon to Indian farmers", International Conference on Innovative Research and Solution, ICRS -15, 11 April 2015, Paper ID: JJT-IC-030-2015, Bengaluru, Karnataka, India.
- Saishree Raikar D., Rohini S. Patil, Krishnamurthy Bhat, "A non-invasive method of measurement of Vitamin C and mineral content in Apples using ultraviolet/visible scanning", International Conference on Innovative Research and Solution, ICRS -15, 11 April 2015, Paper ID: JJT-IC-033-2015, Bengaluru, Karnataka, India.
- Ankur S. Mahajan, R. Y. Pattar, R. Khamitkar, M. Akalawadi, Krishnamurthy Bhat, "Doctor's innovative clinic: An application of artificial intelligence and physiological sensors," IEEE International Conference on Advances in Human Machine Interaction (HMI), Doddaballapur, Karnataka, India, 2016, pp.1-5, doi:10.1109/HMI.2016.7449162.
- 12. S. Nagalikar, R. Halki, C. Bengeri, K. Bhat, "Design and Development of CREOGHRITA: A Portable Intelligent Ghee Making Machine," International Conference on Computational Techniques, Electronics and Mechanical Systems (CTEMS), Belgaum, India, December 2018, pp. 208-212.
- 13. Arathi Nashi, Husnara Pinjara, Deepti Challagidad, Savita Girijavvagol, Krishnamurthy Bhat, "Plate Wiper: A Novel Plate Washing Machine using Dry Sand and Wiper to Save Water," International Conference on Innovation in Computer Science, Electrical and Electronics Engineering (ICICEE-2020), CIT, Gubbi, Karnataka, India. 03 July 2020.
- 14. Krishnamurthy Bhat, Chayalakshmi C. L., "Advanced Glove for Deaf and Dumb with Speech and Text Messages on Android Phone," Bangalore Section IEEE International Conference for Innovation in Technology 2020 (INOCON 2020), Bangalore, India, November 2020, https://ieeexplore.ieee.org/document/9298283, pp.1-7, doi: 10.1109/INOCON50539.2020.9298283.
- 15. Shweta Malpani, Krishnamurthy Bhat, "GPS and IoT based vehicle onroad behavior monitoring and warning system suitable for transport authority," National Symposium on Instrumentation (NSI-42) organized by ISOI, Kumaraguru College of Technology and DRDO Dehradun, 28 29, December 2020, NSI-42 Symposium Proceedings, pp. 25.
- Rasheshwari Mathad, Krishnamurthy Bhat, "A multipurpose Noise and Vibration Data Acquisition System Using OTA Amplifiers and Filters," IEEE 2nd International Conference of Emerging Technology (INCET 2021), 21-23, May 2021, DOI: 10.1109/INCET51464.2021.9456175.
- 17. Krishnamurthy Bhat, Chayalakshmi C. L., "Anti-Sinking Airbag and Indicating System for Vehicle during Flood," International Conference on Sustainable Solutions in Engineering and Technology, 29th and 30th August 2024, Basaveshwar Engineering College, Bagalkote, Karnataka, India.
 - A talk on "Sensors & Transducers" at one week short term training program on "Mechatronics" conducted by BVVS Polytechnic,

- Bagalkot, Karnataka, India, Dt: 26-12-2006.
- A talk on "Piezo-Sensors" at two days National seminar on "Modern sensors & their applications" conducted by Physics department, Basaveshwar Engg. College, Bagalkot, Karnataka, India Dt: 26-12-2006.
- A talk on "Entrepreneurship as a career option" at Enterpreneurship Development Cell (EDC), Basaveshwar Engg. College, Bagalkot, Karnataka, India Dt: 08-04-2006.
- A talk on "Entrepreneurship development" at one week short term training program on "Organizational behavior and management" conducted by BVVS Polytechnic, Bagalkot, Karnataka, India, Dt: 24-02-2006.
- Invited lecture and conducting laboratory sessions for Electronic Equipment Servicing Course conducted by Science and Technology Entrepreneurship Park (STEP), Basaveshwar Engg. College, Bagalkot, Karnataka, India Dt: 29-02-2004 to 15-04-2004.
- Technical judge for hardware project exhibition for engineering students (Shrushti-2005), a state level event, held at B.V.B. college of engineering and Technology, Hubli, Karnataka, India.
- Invited talk on "Electronic Sensors" at BVVS Science College, Bagalkot, Karnataka, India on 22-02-2007.
- Invited talk on "PLCs and Ladder Diagram" at BVVS Polytechnic, Bagalkot, Karnataka, India on 28-02-2007.
- Invited talks at BVVS polytechnic and RDF Bagalkot
- Session Chairperson of National Symposium on Instrumentation 38, held at BVB CET, Hubli on 24-26, Oct. 2013
- BoE member Visvesvaraya Technological University, Belgaum for 2013-14
- BoS member of Dept. of E& IE, PDA College of Engg., Kalburgi, Karnataka from 2017 to 2019.
- Bos Member + Purchase committee member of IT department of BVVS polytechnic, Bagalkot
- Member, Instrumentation Board, Horticulture University, Bagalkot w.e.f June 2016
- Rendered technical services to S.Nijalingappa Medical College, Bagalkot
- Rendered technical services to P.M.Nadagouda Dental College, Bagalkot
- Designed a "Human Bite Force Measuring Instrument", which is fully professional and commercially sold to many customers
- Designed and implemented an instrument on "Photo Diode Characteristic" which is fully professional and commercially sold to many customers
- Nomine of VTU, Belgaum to Board of Studies (BoS) in Electronics and Instrumentation of PDA College of Engineering, Kulburgi, for the period 03-02-2017 to 02-02-2019
- Chief Guest 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.
- Conducted 03 (three) sessions on PLCs, SCADA and VFDs 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.
- BoS Member of BVVS Polytechnic (Autonomous), Bagalkot 587101, Karnataka State for the year 2015-16, 2016-17, and from 2018-19 till

date.

- Guided an M. Tech project "PLC controlled suction adhesive lead screw mechanism based autonomous wall climbing robot for surface cleaning" of the candidate: Ms. Mangala S. Hiremath of PESITM, Shivamogga during the academic year 2015-16.
- Expert Member of Technical Committee Team for the Centralized Equipment Facility of University of Horticulture Science (UHS), Bagalkot 587104, Karnataka, India, from May 2016.
- Delivered a talk on "Test for Entrepreneurial Competencies/ Traits", on 09-07-2016, at BEC-STEP, conducted by BEC-STEP in association with Entrepreneurship Development Institute of India (EDII), Ahmadabad.
- Delivered a lecture on "Entrepreneurship Awareness Camp" at Basaveshwar Science College, Vidyagiri, Bagalkot, on 15-09-2016, organized by Amruta Institute of Engineering and Management Science, Ramnagar, Bangalore.
- Guide for the following technical projects funded by KBITS, GoK (each project for Rs.3 Lakh Max.), under New Age Incubation Network (NAIN) scheme:
 - 1. Automated artificially ripened fruits detector
 - 2. Automated Urine analyzer for vital parameter display suitable for public toilet
 - 3. Power generating road humps and smart street light
 - 4. Banana fruit ripening controller
 - 5. Techno-cradle
 - 6. Appletron
- Three projects are applied to KBITS, GoK (each project for Rs.3 Lakh Max.), under New Age Incubation Network (NAIN) scheme for the year 2017-18.
- Conducted one day highly hands-on workshop on "Electronic Hardware-From Sensors and components level to complete ready PCB including soldering and fully working for day-today application" at BVVS Science College, Bagalkot (BSc. Students) on 24-03-2018.
- A webinar on "Innovative Idea to Indian Patent: A Clear Road Map" on 27-10-2020 organized by Institute Innovation Council 3.0 (of MHRD), Basaveshwar Engineering College, Bagalkot on 27.10.2020
- A webinar on "Why and How to Write Technical papers" organized by Instrument Society of India (ISOI)- BEC Students chapter on 02.12.2020
- A webinar on "Innovative Idea to Indian Patent: A Clear Road Map" at AICTE-ISTE sponsored Refresher Program on "Preparation of Lab Manual and Project Evaluation" organized by Government Polytechnic, Bagalkot, on 04-03-2021.
- Session chair for IEEE Conference "International Conference INCET 2021" on 23rd May 2021.
- Delivered an invited talk on "Technology Readiness Level (TRL) for project works" at One day Orientation program for final year students conducted by Dept. Of E&CE, BEC, Bagalkot on 06.12.2023
- Delivered an invited talk on "Road-map to Indian Patenting" at One day Orientation program for final year students conducted by Dept. Of E&CE, BEC, Bagalkot on 06.12.2023
- Member of Internal Quality Assurance Cell (IQAC) of B.V.V.S. Polytechnic, Bagalkot for the academic year 2023-24 and 2024-25, w.e.f 15.11.2023
- Delivered an talk on "Bioinstrumentation and Biosensors" under Expert Talk Series 2023-24, organized by Dept. of BT, BEC, Bagalkot and Microbiologists Society, India on 29.12.2023

Events Organized

Workshop/FDP/SDP:

Attended:

More than 50 of which at least 60% outside the institute STTPs/Workshops/Seminars

Organized:

- SCADA & PLCs for Industrial Automation (TEQIP-I sponsored)
- Intelligent Instrumentation & Robotics (VTU-VGST sponsored)
- Guest Lecturing on "Role of Instrumentation Engineering in Aerospace and Automotive industry" by Mr. Anand Kop, R&D Engineer, Mercedes Benz India Ltd, Bangalore

Conferences/ Symposiums/ Workshops/ Training Programs Attended Awards and Honors

: >30

Best Paper award

1. Arathi Nashi, Husnara Pinjara, Deepti Challagidad, Savita Girijavvagol, **Krishnamurthy Bhat**, "Plate Wiper: A Novel Plate Washing Machine using Dry Sand and Wiper to Save Water," International Conference on Innovation in Computer Science, Electrical and Electronics Engineering (ICICEE-2020), CIT, Gubbi, Karnataka, India. 03 July 2020.

Session Chair:

Selected as a Session chair:

- 2021 2nd Global Conference for Advancement in Technology (GCAT) during 1 st to 3 rd October 2021, organized by Nagarjuna College of Engineering and Technology, Bangaluru, technically co-sponsored by IEEE Bangaluru section.
- 2. 2021International 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.
- **3.** 3rd International Conference of Emerging Technology (INCET 2022) 27th 29th May 2022, organized by Jain College of Engineering, Belagavi, technically co-sponsored by IEEE Bangalore section.

Professional Membership

: Indian Society for Technical Education (ISTE) – LM26089

Instrument Society ofIndia (ISOI) – LM 1376