FACULTY PROFILE

Name of the Faculty	**Dr. KUSUMADHARA S**
Designation	**Professor & Head**
Contact Numbers	**Office: 08257- 231141** **Mobile: +91 - 9019761755**
E-mail ID	**kusumadhara5 [*at] gmail.com**

- **Educational Qualification**

Degree	Specialization	Year of Passing	College & University
B.E	Electrical and Electronics Engineering	1999	KVGCE, Sullia, Mangalore
M. Tech	Digital Electronics and Communication (DE&C)	2006	KVGCE, Sullia, VTU
Ph.D.	Machine Learning	2022	KVGCE, Sullia, VTU

- **Work Experience**

Teaching	Research	Industry
23 years	8 years	NIL

- **Date of Joining to the College**

17th April 2000

• In-House Experience

Designation	Duration		Department
	From	**To**	
Lecturer	17-04-2000	28-02-2007	E & E
Asst. Professor	01-03-2007	31-07-2011	E & E
Asst. Professor	01-08-2011	01-03-2012	E & C
Associate Professor	02-03-2012	05-06-2022	E & C
Professor & Head	06-06-2022	Till the date	E & C

• Area of Interest

Pattern Recognition	Machine Learning	Soft Computing	IOT	Automotive Electronics

• Subject Taught

- Machine Learning
- Image Processing
- Microprocessors
- Microcontrollers
- Automotive Electronics
- Computer Organization
- Machine Design

- Network Analysis
- Digital Signal Processing
- VLSI Circuits and Design
- Error Control Coding
- Basic Electrical Engineering
- Design of VLSI Systems
- Logic Design
- Electrical Measurements

- Signals and Systems
- Field Theory
- Arduino Microcontrollers
- Power Electronics
- Liner ICs and Applications
- Analog Electronics Circuits
- Control System
- Electronic Instrumentation

• Membership in Professional Bodies/University Bodies/Organizations

Member of Indian Society for Technical Education (MISTE) : LM – LM62152 (2009)

• Publications

National / International Journals	National / International Conferences
06	06

• Publications : National / International Journals

1. Kusumadhara S, Ravikumar M S, Raghavendra P, "A Framework for Grading of White Chali Type Arecanuts with Machine Learning Algorithms", International Journal of Recent Technology and Engineering, ISSN: 2277-3878, Volume-8 Issue-6, pp 2782- 2788, March 2020, doi: 10.35940/ijrte.f8389.038620

2. Kusumadhara S, Ravikumar M S, "Segmentation of White Chali Arecanuts using Soft Computing Methods", International Journal of Innovative Technology and Exploring Engineering (IJITEE) ISSN: 2278-3075, Volume-9 Issue-7, pp 1049-1055, May 2020, doi: 10.35940/ijitee.g5848.059720

3. Kusumadhara S, et. al, "A Deep Feature Learning Model for Pneumonia Detection Applying a Combination of MRMR Feature Selection and Machine Learning Technique", International Journal of Engineering Research and Applications, Volume-11, Issue 5, pp 61-73. May 2021, doi: 10.9790/9622-1105016173

4. Kusumadhara S, Bhagya H. K, Thejas A V, "IoT Based Intruder Detection Using Real Time Object Detection", International Journal of Innovative Research in Technology, Volume 9, Issue10, Pages 177-182, March 2023, doi: IJIRT 158620

5. Kusumadhara S, Sathyajith M. Jagadeesh M, "Machine Learning Based Genetic Algorithmic Optimization Model for Inpatient Length-of-Stay Prediction", International Journal of Engineering Research and Applications, Volume 13, Issue 3 Pages 43-50, March 2023, doi: 10.9790/9622-13034350

6. Kusumadhara S, Prathima M., Adarsha D, Bhagya H. K, Savitha M "Implementation of Heart Rate and Temperature Monitoring Device Using Wireless System", International Journal of Creative Research thoughts, Volume 11, Issue 7, pp 878-884, July 2023.

• Publications : National / International Conferences

1. Lossless compression of digital images using base switching method. "*National conference on Computer Vision, Pattern Recognition, Image processing and Graphics. NCVPRING - 10*", 18-10-2010.

2. Design of shunt active filter using instantaneous reactive power theory "*4th National conference on Advances in Energy Conversion Technologies*", 2011.

3. A comparative analysis of Error control codes for Image transmission "*National conference on Computer Communication and Advanced Computing*", 2012.

4. JPEG 2000 image transmission based on PFDM system using unequal power allocation "*National conference on emerging exposition*", 2013.

5. Efficient routing protocol in MANETS by using Alert. "*National conference on emerging trends in electronics and communication*", 2013.

6. Design and analysis of an area efficient boostable repeater for variation resilience in VLSI interconnect, "*National conference on recent trends in electronics and communication*", 2014.

• Professional Activities: NPTEL Course

NPTEL (National Program on Technology Enhanced Learning)	Subject	Year of Certification
	1. Teaching and Learning in Engineering (TALE)	Feb 2019
STEP-NITK-IEEE Industrial Internship Program	**2. IOT with Machine Learning**	July 2021 (One-month Internship Program) (4weeks FDP)

• Faculty Development Programmes (FDP) Participated

SL. No.	Program Title	Venue	Date & Year
1.	Faculty Development Program	KVGCE-ISTE chapter	23-06-2001 (Two days)
2.	Trends in Pattern Recognition	Malnad College of Engineering, Hassan	22-04-2006 (One day)
3.	Opportunities for Sponsored Research and Collaboration with IT Industries	KVG College of Engineering	11-12-2009 (One day)
4.	Microcontrollers and HDL Lab	R.N.S. Institute of Technology. Bangalore.	30-01-2018 (Three days)
5.	FDP on Python – A Practical Approach	KVG College of Engineering	13-06-2023 (Two days)

• Workshops / Short-term Course Attended

SL. No.	Workshop Title	Place	Date & Year
1.	Microprocessor Laboratory	Basaveshwar Engineering College, Bagalkot	20-04-2001 (Two days)

2.	System analysis and Digital Signal Processing	NMAM Institute of Technology, Nitte	13-02-2006 (Six days)
3.	Mathematical Tools for Engineering Applications	KVGCE, Sullia	13-05-2006 (One day)
4.	High Impact Teaching Skills (Mission 10X Workshop)	V.C.E.T Puttur, Sponsored by Mission10X, Wipro Technologies Pvt. Ltd.	01-06-2009 (Five days)
5.	ARM Architecture and Applications	N.I.T.K Surathkal.	09-03-2009 (Two days)
6.	Issues in System Analysis: MATLAB as a Computational Tool	N.I.T.K Surathkal.	27-07-2009 (Six days)
7.	MSP430 microcontrollers	Vidya Vikas Institute of Engg. & Technology, Mysore	12-12-2011 (Two days)
8.	Guided and Free Space Optical Communication Systems and Networks	N.I.T.K Surathkal.	16-08-2011 (Five days)
9.	Intellectual Property and Innovation Management in Knowledge Era	K.V.G. College of Engineering, Sullia	12-11-2013 (One day)
10.	Organic Electronic Materials & Devices	N.I.T.K Surathkal.	19-12-2013 (Three days)
11.	ARM Made Easy	K.V.G. College of Engineering, Sullia	05-05-2015
12.	Experiential Learning Through Virtual Lab	K.V.G. College of Engineering, Sullia	18-04-2018 (One day)
13.	Machine Learning & its Applications in Engineering & Technology	NMAMIT Nitte	02-01-2018 (Five days)

- **No. of Project Guided**

UG	PG
32	10

- **Responsibilities Taken in College Level**

Event	Positions	Duration	
		From	To
Centralized Internal Assessment Test	Coordinator	02-02-2009	14-10-2018

Centralized Internal Assessment Test	Chief Coordinator	15-10-2019	05-06-2022
University Examination Cell	Chairman	15-10-2019	05-06-2022
Library stock verification	Chairman	2012	2014
Technical Fest (Vison & Thantrajna -13)	Treasurer	05-08-2012	06-09-2013
Alumni Association, Sullia Chapter	Member	17-03-2010	12-02-2013
NBA	Coordinator for Criteria -3	2018	05-06-2022
College Publicity Committee	Chairman	2022	Till the date

• Responsibilities Taken in Department Level

Event	Role	Duration	
		From	To
1. Electrical Engineering Association	Treasurer	18-02-2002	31-07-2011
2. Electrical Engineering Association	Staff Advisor	23-03-2001	18-08-2004
3. Student Counselling	Coordinator	19-08-2009	02-08-2012
4. Project work (UG)	Coordinator	01-08-2011	09-05-2013
5. Time Table	Coordinator	01-03-2012	04-12-2014
6. Microcontroller Lab	In- charge	01-03-2012	01-04-2013
7. NBA Criteria – VIII	In- charge	01-03-2012	01-05-2018
8. Career Guidance	Coordinator	01-03-2012	01-03-2014
9. U. G Project Review Committee	Member	02-03-2014	01-05-2018
10. Academic Audit Committee	Member	02-03-2014	05-06-2022

• Participation details in the college level event.

SL .No.	Event	Position / Role
1.	Faculty development program under ISTE chapter -2011	Resource Person
2.	Alumni meet conducted by Sullia Chapter - 2015	Organizing committee member

3.	e-induction -2012 (State level project exhibition)	Judge
4.	Annual day celebration committee	Member
5.	Rastriya Avishkaara Abhiyana, for Primary School Students - 2016	Resource Person
6.	e-induction (e-Yojana) -2016	Judge
7.	Technical Talk on Arduino Programming, Under EDC-2018	Resource Person
8.	College Anti-ragging committee	Member
9.	Project Exhibition "EXPO"	Member
10.	Infosys foundation program	Member

• Participation details in the Department level activities

SL .No.	Event	Role / Responsibilities
1.	E-induction-09, A state level Paper presentation competition.	Coordinator
2.	Vidyut vyuha-10, A state level Troubleshoot competition.	Judge
3.	e-Chethana- 17, A State level Technical Quiz	Judge
4.	e-Samalochana-18, A National Level Paper Presentation	Judge
5.	Counselling	Counselor for EC Students & Other dept. activities
6.	Mentor	Mini-project work 5th semester Students
7.	Resource Person	Intra-institute internship (Area: embedded Systems)
8.	Chairman	For various committees of after assuming the post of HOD (06-06-2022)

• No. of Lab Manual / Program Guidelines Prepared

SL. No.	Lab manual / Guide lines Title	Semester and branch	Year
1.	PSPICE Lab Manual	4th E&E	2002

2.	Transformers & Induction Machines Lab Manual	6th E&E	2002
3.	Digital Electronics Circuits Lab Manual	3rd E&E	2003
4.	Circuit Simulation & Measurements	6th E&E	2004
5.	Logic design Lab	3rd E&E	2007
6.	Microcontrollers Lab	4th E&E	2008
7.	Microcontrollers Lab	4th E&C	2010
8.	Digital Electronics Lab	3rd E&C	2018
9.	A Practical Course on Arduino Microcontroller	5th E&C	2019

• Labs handled for UG and PG

SL. No.	Lab Title	Year	Semester & Branch
1.	DC and Synchronous Machines Lab	2000, 2001, 2005	5th E&EE
2.	Transformers & Induction Machines Lab	2001, 2002, 2004	6th E&EE
3.	Circuits simulation & Measurements Lab	2003, 2004, 2007	6th E&EE
4.	Control System Lab	2006, 2007, 2008	6th E&EE
5.	Microcontrollers Lab	2007, 2008, 2009	4th E&EE
6.	Logic Design Lab	2007, 2008, 2009	3rd E&EE
7.	Analog Electronics Lab	2007, 2008,2010	5th E&EE
8.	Power Electronics Lab	2007, 2008	6th E&EE
9.	Microcontrollers Lab	2011, 12,13,14,15	4th E&C
10.	Analog Electronics Lab	2013	3rd E&C
11.	Digital Signal Processing Lab.	2011,12,13,14,15,16, 17,18	5th E&C
12.	Microprocessor Lab	2016, 17	6th E&C
13.	Microprocessor Lab	2018	4th E&C

14.	Digital Electronics Lab	2018	3rd E&C
15.	Arduino Lab (Add on Course)	2019	5th E&C
16.	IOT and Machine Learning Lab	2021	7th E&C

• Interaction with Outside World / Invited Lectures

Sl.No.	Program	Venue and Organizer	Date
1.	Served as Presiding Officer in Parliamentary Constituency and Assembly Constituency Elections	Belthangady	26th March 2004
2.	Instructor for 'Student Internet World Program'.	KVGCE, Govt. of Karnataka	26th to 29th Oct 2005 (4 days)
3.	Judge for Project Exhibition Tech Nidarshan-10	NMAMIT Nitte	12th Nov 2010
4.	A technical talk on Electronics for SSLC students	GHS Yenmur	24th & 25th Sept 2011
	Judge for Avishkaar- a Project expo	Canara Engineering College, Mangalore	24th April 2014
	Judge for Project exhibition	Canara Engineering College, Mangalore	30th April 2016
	Judge for Project exhibition	Srinivas University, Mukka, Mangalore	16th May 2018
	Resource person for Meditation Program	Nehru Memorial PU College Sullia	9th May to 11th May 2019 (3 days)

• Awards / Recognition / Achievements/ Others

- Secured **3rd Rank** in V.T.U M.Tech. Examination under Digital Electronics and Communication, in 2007.
- Awarded with **Dr. K.V.G Meritorious Gold Medal** for the excellence in M. Tech Program (2007).
- Served as a member of **Local Inspection Committee (LIC)** of Visvesvaraya Technological University, Belagavi.

Dr. KUSUMADHARA S, Professor & Head, E &C DEPT., KVGCE, SULLIA, D.K - 574 327

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