



# Malnad College of Engineering, Hassan

(An Autonomous Institute, Affiliated to V.T.U, Belagavi)

## Faculty Biodata

### GENERAL INFORMATION AND ACADEMIC BACKGROUND

#### PART-A

1.	Name	Dr. TRIVENI.C.L
2.	Qualification	B.E., M.Tech., PhD.
3.	Date of joining the service at MCE	14-15-2003
4.	Department	Electronics and Communication
5.	Current Designation & Experience in MCE	Associate Professor & 22 years
6.	Teaching Experience: P.G. (in Years) : U.G. (in Years) :	10 years 22 years
Research Experience (in Years)		
7.	a) Total Number of years b) Years spent in M. Phil. / Ph.D. c) Years of Guiding Ph.D. / M. Phil. d) Total No. of papers Published in i. International Journals ii. National Journals iii. Conference Proceedings e) Total No. of Conferences/Seminar/Workshop Attended i. International ii. National iii. State Level	10 07 00  15 00 30  04 64 00
8.	Awards /Prizes/ Honor's / Recognitions	06
9.	Fields of Specialization under the Subject / Discipline	Photonics, Elastic optical networks, IOT, Quantum
10.	Orientation/Refresher Course/Summer School / Winter School/Workshops attended:	28

## **PART-B**

- 1. Responsibilities in the Department and Institute / University:** (DAC,DPC, BOS, BOE etc., Institutional Governance responsibilities like, Dean, Chief warden, Warden, HOD's, School/Centre Chairperson, IQAC Coordinator etc.)

Sl. No	Responsibilities
1.	Member of Departmental BOS
2.	Member of Departmental BOE
3.	Academic Council Member, MCE Hassan for the academic year 2014 to 2016.
4.	Member of Canteen committee, MCE Hassan from 2014 to 2019.
5.	E & C Association Convener from the year 2016 to 2021.
6.	Departmental NBA coordinator December-2020-2022.
7.	Member for Adhoc BoS committee for new programme B.E. in Computer Science & Engg.(AI & ML) at MCE Hassan.
8.	Member for SC/ST Committee (prevention of Atrocities) at MCE Hassan.
9.	Convener for interdisciplinary student projects for 2022-23.
10.	Member for NBA SAR preparing for Criteria-8(First year academics)

Professional Development Activities		
1.	Membership in profession related committees at state and national level a) At International :03 b) At national level: 01 c) At state :	1.IEEE Senior member 2. IEEE Communications Society member 3.IEEE Photonics Society member 4.Life member of ISTE.
2.	Participation in subject associations, conferences, seminars without paper presentation	03
3.	Participation in short term training courses less than one week duration in educational technology, curriculum development, professional development, Examination reforms, Institutional governance	33
4.	Membership/participation in State/Central Bodies/Committees on Education, Research and National Development	01
5.	Publication of articles in newspapers, magazines, or other publications (not covered in category 3); radio talks; television programmes	00
6.	Invited Expert Talks	10

## **PART-C**

### **RESEARCH, PUBLICATIONS AND ACADEMIC CONTRIBUTIONS**

#### **1. Published Papers in Journals**

<b>Sl. No.</b>	<b>Title</b>	<b>Journal with Vol. Year &amp; Page No.</b>	<b>ISSN / ISBN No.</b>	<b>Whether peer reviewed. Impact factor, if any</b>	<b>No. of Co-authors</b>	<b>Whether you are the main author or Guide / mentor</b>
1	Friend Based Routing Algorithm for Wireless Sensor Networks	International Journal of Computer Science, System Engineering and Information Technology, Vol. 5, No. 2, December 2012, pp. 207-218	--	Peer reviewed	01	Main Author
2	Implementation and Analysis of Multiple Criteria Decision Routing Algorithm for Wireless Sensor Networks	International Journal of Electronics and Communication Engineering Research and Development (IJECEERD), Volume 4, Number 2, April- June (2014), pp. 28-35	ISSN 2248– 9525 (Print) ISSN 2248 – 9533 (Online)	Peer reviewed [Impact factor in 2014: 6.3456]	02	Guide
3.	Faulty Node Recovery and Replacement Algorithm for Wireless Sensor Network	International Journal of Electronics and Communication Engineering Research and Development (IJECEERD Volume 4, Number 2, April- June (2014), pp. 36-44	), ISSN 2248– 9525 (Print) ISSN 2248 – 9533 (Online)	Peer reviewed [Impact factor in 2014 : 6.3456]	02	Guide
4	Minimum Resource Consumptions Routing for Optical Networks	International Journal of Electronics and Communication Engineering Research and Development (IJECEERD), Volume 4, Number 2, April- June (2014), pp. 64-72	ISSN 2248– 9525 (Print) ISSN 2248 – 9533 (Online)	Peer reviewed [Impact factor in 2014 : 6.3456]	03	Mentor
5.	A Study on “Link Weight Performance Analysis in an Intra-domain Networks	International Journal of Electronics and Communication Engineering Research and Development (IJECEERD), Volume 4, Number 2, April- June (2014), pp. 64-72	ISSN 2248– 9525 (Print) ISSN 2248 – 9533 (Online)	Peer reviewed [Impact factor in 2014 : 6.3456]	03	Guide

6.	Implementation of Genetic Algorithm for Combined Routing and Dimensioning for Dynamic WDM Networks	International Research Journal of Engineering and Technology (IRJET), volume:02 Issue:03/June-2015, pp1146-1150.	e-ISSN:2395-0056, p-ISSN:2395-0072,	Peer review [Publication Impact Factor (PIF):2.518 for 2014]	01	Guide
7.	Design & Implementation of RWA for Optical WDM Networks”	International Research Journal of Engineering and Technology (IRJET), volume:02 Issue:03/June-2015, pp1146-1150.	e-ISSN:2395-0056, p-ISSN:2395-0072,	Peer review [Publication Impact Factor (PIF):2.518 for 2014]	01	Guide
8.	A Review on Spectrum Sliced Elastic Optical Path Networks	International Journal of Electronics and Communication Engineering Research and Development (IJERECE), Volume 4, Number 2, April- June 2016, pp. 115-123	ISSN 2248– 9525 (Print) ISSN 2248 – 9533 (Online)	Peer review [Impact factor in 2014 : 6.3456]	02	Main author
9.	Efficient Privacy-Preserving Authentication for Automated Billing Infrastructure in Smart Grids	International Journal of Creative Research Thoughts (IJCRT) Volume.6, Issue 2, Page No pp.579-586, APRIL 2018.	ISSN:2320-2882,	Peer review	03	Guide
10	Spectrum Allocation Policies for Flex Grid Network with Data Rate Limited Transmission	International Research Journal of Engineering and Technology (IRJET) Volume: 05 Issue: 06   June-2018.	e-ISSN:2395-0056, p-ISSN:2395-0072,	Peer review	02	Guide
11	Secure Cloud Assisted Data Analysis Process for Smart Phone Tasks	International Journal of Science and Research (IJSR), <a href="https://www.ijsr.net/archive/v7i6/ART20183222.pdf">https://www.ijsr.net/archive/v7i6/ART20183222.pdf</a> , Volume 7 Issue 6, June 2018, 1002 - 1006,	DOI: 10.21275/ART20183222	Peer review	01	Guide
12	Spectrum fit allocation techniques for SLICE optical networks	International Journal for light and Electron Optics-science Elsevier (Optik), Volume 165, July 2018, Pages 380-387, ISSN 0030-4026.	<a href="https://doi.org/10.1016/j.jileo.2018.03.022">https://doi.org/10.1016/j.jileo.2018.03.022</a>	Peer review	02	Main author

13	DESIGN OF RING RESONATOR FOR BIOMEDICAL APPLICATIONS	IJRAR - International Journal of Research and Analytical Reviews (IJRAR), , Volume.9, Issue 3, Page No pp.770-773, July 2022,	E-ISSN 2348-1269, P-ISSN 2349-5138	Peer review	02	Guide
14	Photonic Crystal-based Biosensor to Detect Multiple Myeloma from Blood Serum	Journal of Optics (2023).	<a href="https://doi.org/10.1007/s12596-023-01145-6">https://doi.org/10.1007/s12596-023-01145-6</a> SN - 0974-6900.	Peer review	02	Main author
15	A novel approach to solve RSA problem in the spectrum sliced elastic optical networks.	<i>Journal of Optics</i> (2024)	<a href="https://doi.org/10.1007/s12596-024-01950-7">https://doi.org/10.1007/s12596-024-01950-7</a>	Peer review	04	Main Author
16	Multiple-Input Multiple Output-Orthogonal Frequency Division Multiplexing System using Improved Wild Horse Optimization for Channel Estimation	International Journal of Intelligent Engineering and Systems	<a href="https://doi.org/10.22266/ijies2024.1031.60">https://doi.org/10.22266/ijies2024.1031.60</a> Vol.17, No.5, August 2024.	Peer review	06	Co author
17	Free space optical communication using OQPSK in the presence of strong atmospheric turbulence and losses.	Optical and Quantum Electronics	<i>Opt Quant Electron</i> <b>56</b> , 1669 (2024). <a href="https://doi.org/10.1007/s11082-024-07591-1">https://doi.org/10.1007/s11082-024-07591-1</a>	Peer review	02	Co- author

## 2. Training Courses, Teaching-Learning-Evaluation Technology Programs, Faculty development Programmes Conducted.

Sl. No.	Name of Course/Summer/Winter School	Duration	Organized By
1.	Emerging trends in Optical Communication & Optical Engineering	2 days (14th to 18th July 2014)	Under TEQIP-II and technically co-sponsored by IEEE photonics society at Dept of ECE MCE, Hassan.
2.	Recent Technological Innovations in Optical Engineering	One week (14th to 18th July 2014)	Under the assistance of TEQIP –II & Technically co-sponsored by IEEE Photonic Society, Karnataka Chapter at Dept of ECE MCE Hassan
3.	Sensor Design and Implementation	Two days (4th and 5th Feb 2017)	Under TEQIP-II in association with EDULIFE, India at Dept of ECE MCE, Hassan.
4.	Hands on Training on Internet of Things	Two days (5th and 6th March 2017)	Under TEQIP-II in association with EDULIFE, Bangalore, India at Dept of ECE, MCE Hassan.
5.	Internet of Things for Real Time Applications	Two days (13th and 14th March 2017)	Under TEQIP-II in association with EDULIFE, Bangalore, India at Dept of ECE, MCE Hassan.
6.	Hands on Training on NETSIM	One day (27th March 2017)	Under TEQIP-II at Dept of ECE, MCE Hassan.
7.	Recent Innovative Technologies in Communication	One day (13th October 2018)	(Sponsored by TEQIP-III) with academic partner IEEE Comsoc Bangalore Chapter at Dept of ECE, MCE Hassan
8.	Next Generation Communication systems	Two days (12th-13th November 2018)	under TEQIP – III with academic partner IEEE Photonics Bangalore Chapter at Dept of ECE, MCE Hassan.
9.	Hands on training on Photonic Sensor Simulation Tools	Three days (3rd to 5th October 2019)	under TEQIP-III with academic partner IEEE Photonics Bangalore Chapter at Dept of ECE, MCE Hassan.
10.	Wireless Communication	One week (02 Sept 2020 –08 Sept 2020)	IEEE MCE Joint Photonics & ComSoc Chapter MCE STUDENT BRANCH and IEEE ComSoc Bangalore
11.	Terabit Optical Networks	One day MAY 20th, 2021.	IEEE MCE Joint Photonics & ComSoc Chapter MCE STUDENT BRANCH and IEEE photonics society, Bangalore chapter
12.	Quantum and Photonics	One week (29th November 2021 to 3rd December 2021)	AICTE sponsored online FDP at Dept of ECE, MCE Hassan.

13.	Computational Nano-Photonics: Basics challenges and future perspectives	2nd February 2022	IEEE Photonics Society, Bangalore Chapter
14.	Engineering Optical Properties of Molecules at Nanoscale: What, why, and how?"	5th March 2022	IEEE Photonics Society, Bangalore Chapter
15.	DOPANT-FREE GaAs DEVICES FOR OPTOELECTRONICS	March 14th, 2022	IEEE Photonics Society Bangalore Chapter in Association with Applied Photonics Initiative IISC on the occasion of Albert Einstein's birthday.
16.	International Light Day	16th May 2022	Dept of ECE, MCE Hassan.
17.	Introduction to Software Define radio 5G and functional split for virtual Ran	18 <sup>th</sup> June 2022	Department of Electronics and Communication Engg, MCE Hassan
18.	Workshop on Photonics Sensors	15th October 2022	IEEE Bangalore section and IEEE sensors at Indian Institute of Science at Golden Jubilee Seminar Hall, Electrical Communication Engineering department, IISC, Bengaluru.
19.	Hybridization in plasmonic devices: a path to outperform their Si Counterparts.	March 14th, 2023	IEEE Photonics Society Bangalore Chapter
20.	Photonic Simulations Using Ansys Lumerical	16.08.2023 & 17.08.2023	IEEE Photonics Society Bangalore Chapter
21.	Physics and High Performance of Quantum Dot LASERS"	18th October 2023	IEEE Photonics Society Bangalore Chapter
22.	Modeling Optic and Photonic Devices using COMSOL Multiphysics	22 <sup>nd</sup> November 2023	IEEE Photonics Society Bangalore Chapter
23.	National Symposium	20 <sup>th</sup> to 24 <sup>th</sup> Feb 2024.	IEEE MCE ComSoc Chapter and IEEE MCE Student Chapter in Association with Science Association and hosted by the Department of Electronics and Communication, MCE Hassan
24.	Advances In Photonic Crystal And FBG Applications	5 <sup>th</sup> March 2025	DST-SERB at the Department of Electronics and Communication, Malnad College of Engineering Hassan

### 3. Papers presented in Conferences, Seminars, Workshops, Symposia

Sl. No.	Title	Title of Conference/Seminar etc.	Dates of the Event	Organized by	Whether International/National/State/Regional/University/College Level
1	A New Highly Secure and Efficient Friend Based Routing Algorithm for Wireless Sensor Networks	International Conference on Current trends in Engineering and Management (ICCTEM)	July 12- 14 2012.	VVCE, Mysore	International

2	An IP Traceback system to find the real source of attack using FDPMP	Fourth IEEE International Conference on Computing, Communication and Networking Technologies,	July 4 - 6, 2013	Vivekanandha College of Engineering for Women, Tiruchengode, Tamil nadu	International
3	Novel Defense mechanism against data flooding attacks in Ad hoc network	Fourth IEEE International Conference on Computing, Communication and Networking Technologies,	July 4 - 6, 2013	Vivekanandha College of Engineering for Women, Tiruchengode, Tamil nadu	International
4	OFDM Transceiver Design using C	Fourth IEEE International Conference on Computing, Communication and Networking Technologies,	July 4 - 6, 2013	Vivekanandha College of Engineering for Women, Tiruchengode, Tamil nadu	International
5	A Study on "Link Weight Performance Analysis in an Intra-domain Networks	International Conference on Electronics, Communication, Computer Science and Information Technology (ICECCSIT-2014)	27th April 2014	Technoarete Explore ,Begaluru, pp No.20-24,ISBN:9788192714745	International
6	Design and Analysis of Combined Grade Diffusion and Genetic Algorithm for wireless sensor Networks	International Conference on Electronics, Communication, Computer Science and Information Technology (ICECCSIT-2014)	27th April 2014	Technoarete Explore ,Begaluru, pp No.20-24,ISBN:9788192714745	International
7	Implementation and Analysis of Multiple Criteria Decision Routing Algorithm for Wireless Sensor Networks	International Conference on Electronics, Communication, Computer Science and Information Technology (ICECCSIT-2014)	27th April 2014	Technoarete Explore ,Begaluru, pp No.20-24,ISBN:9788192714745	International
8	Minimum Resource Consumptions Routing for optical networks	International Conference on Electronics, Communication, Computer Science and Information Technology (ICECCSIT-2014)	27th April 2014	Technoarete Explore ,Begaluru, pp No.20-24,ISBN:9788192714745	International
9.	Real Time Implementation of Optical Flow Switching	ASAR-International Conference on Electrical, Electronics and Computer Engineering(ASAR-ICEECE-2014)	14th May 2014	IRAJ Research Forum, , Mysore	International
10	Implementation Of Vanet Routing Algorithm For Vehicular Traffic Information	ASAR-International Conference on Electrical, Electronics and Computer Engineering(ASAR-ICEECE-2014)	14th May 2014	IRAJ Research Forum, , Mysore	International
11	Design And Implementation Of Multicarrier CDMA For Wireless Communication Sysytem	ASAR-International Conference on Electrical, Electronics and Computer Engineering(ASAR-ICEECE-2014)	14th May 2014	IRAJ Research Forum, , Mysore	International
12	Cross-Layer Design of Transport Protocol For Reliable Data Transfer in WSN"	International Conference on Emerging Trends in Engineering Technology (ICET-2014)	8th June 2014	Bangalore	International
13	Least resource consumption for optical WDM Networks	IEEE International Conference on Electrical ,Electronics and Optimization Techniques(ICEEOT) - 2016	3rd to 5th March 2016	DMI College of Engineering,Chennai, Tamil Nadu	International
14	An Optimized routing algorithm for Elastic Optical Network	IEEE International Conference on Electrical ,Electronics and	3rd to 5th March 2016	DMI College of Engineering,Chennai, Tamil Nadu	International



		Optimization Techniques(ICEEOT) - 2016			
15	A Review on Spectrum Sliced Elastic Optical Path Networks	International Conference on Internet of Things & Applications for Smart City	18 th -19th March 2016	Annamacharya Institute of Technology and Sciences (AITS) and IFERP at Tirupathi, Andra Pradesh	International
16	Routing and spectrum allocation in SLICE Optical Networks	International conference on Electrical, Electronics, Communication, Computer Technologies and Optimization Techniques (ICEECOT-2016)	9th & 10th December 2016	GSSS Institute of Engineering & Technology for Women, Mysore	International
17	A Review on BSNL's Next Generation Networks	IEEE-International Conference on Innovative Mechanisms for Industry Applications (ICIMIA 2017)	21st to 23rd February, 2017	Dayananda Sagar College of Engineering, Bengaluru	International
18	A minimum sub-carrier path RSA in Spectrum-Sliced Elastic Optical Path Networks"	IEEE Workshop on Recent Advances in Photonics (IEEE WRAP-2017)	18-19th December 2017	Mahindra Ecole Central, Hyderabad	International
19	Real Time Implementation of Multimedia Traffic using MUX in Optical Networks	PHOTONICS-2018: International Conference on Fiber Optics and Photonics	12-15th December 2018.	IIT, New Delhi	International
20	Spectrum allocation policies in Flexi-grid Optical networks	International Conference on VLSI, Signal Processing, Power Systems, Illumination and Control, Communication and Embedded Systems (VSPICE-2019)	23rd to 24th May-2019	Dept of ECE & EEE at NMAIT Institute of Technology, Nitte, Karnataka	International
21	A Novel Approach for Static RWA based PLI Evaluation of WDM Networks in "WDM-NetSoft	International Conference on Advances in Information Technology (ICAIT-2019),	25th -27th July 2019.	Adichunchanagiri Institute Of Technology Chikkamagaluru – 577 102	International
22	Basic-fit Spectrum allocation for Elastic Optical Networks	IEEE Workshop on Recent Advances in Photonics (IEEE WRAP 2019)	December 13-14th 2019.	Department of Physics, IIT Guwahati	International
23	Design of Biosensor for the Detection of Pregnancy based on HCG Presence in Urine using Photonic Crystal Waveguide	6th International Conference on Electronics, Computing and Communication Technologies, IEEE CONECCT 2020	2-4 July, 2020.	IEEE Bangalore Section	International
24	Design and Implementation of Encoder/Decoder Quantum Circuits using Decimal to Binary Conversion method and vice versa.	7th International Conference on Electronics, Computing and Communication Technologies, IEEE CONECCT 2021	9-11 July, 2021.	IEEE Bangalore Section f	International
25	Design and Implementation Quantum Half Subtractor and Full Subtractor Using IBM Quantum Experience	7th International Conference on Electronics, Computing and Communication Technologies, IEEE CONECCT 2021	9-11 July, 2021.	IEEE Bangalore Section	International
26	2D Photonic Crystal Optical Waveguide Using Lithium Niobate for Elastic Optical Network"	XLVII OSI Symposium International Conference on Advance in Optics and Photonics Instrumentation	23rd to 25th October 2024.	CSIR-CSIO Chandigarh, Punjab	International